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Physical Education Becomes a Fundamental . Carl L. Schrader

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Health and Physical Fitness . . . . . Arthur H Steinhaus

Dance Photographs . . . . . Ruth Alexander

Physical Education and the Parent . . . Mrs. William Kletzer

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National and Central District Association Convention Program

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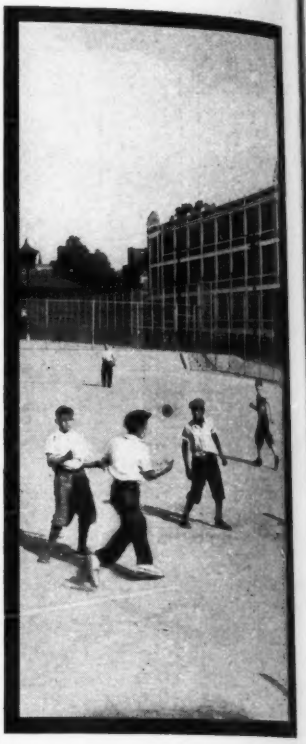

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E. D. MITCHELL, Editor

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CANNED FOODS AND THE PUBLIC HEALTH

III. Chemical Preservatives

• Some of our readers have inquired as to whether or not chemical preservatives are used in commercially canned foods. In certain instances, this question was inspired by the fact that "canning compounds" were formerly sold for use in home canning and preserving operations. Such compounds, however, are rarely used by the housewife of today, and never by commercial canners.

We wish to state here that *no preservatives are used in commercially canned foods.*

Spoilage of food is principally caused by the growth and multiplication in food of microorganisms such as yeasts, molds, or certain types of bacteria. These microorganisms depend upon the food they inhabit for their nutrition and their life processes produce changes in the chemical or physical characteristics of food, or both. These changes lead us to state that the food has "spoiled".

Like other living organisms, these spoilage microorganisms can grow and multiply in a food only as long as conditions remain favorable for their existence. If any environmental factor, such as temperature, moisture or acidity, becomes unfavorable, these spoilage organisms are destroyed, or their development is inhibited.

All methods of food preservation have a common underlying principle; they all alter some factor or factors in the food environment so as to render conditions unfavorable for the growth or development of spoilage organisms in the food.

Thus, foods may be preserved by freezing or refrigeration, which serves to lower the temperature below that optimum for growth of certain spoilage organisms; dried foods keep because the moisture content has been reduced to an unfavorably low level; certain fermented foods keep because of the development of high acidity. All of these methods produce changes in the environment in which the food spoilage organisms must live.

Commercial canning is a method of food preservation in which the temperature factor in the environment is raised to a level above that optimum for growth of spoilage microorganisms. Thus, canned foods keep because in their preparation they are subjected to heat processes in hermetically sealed containers. The thermal processes raise the temperature of the foods to those temperatures at which the most resistant spoilage organisms present cannot grow or survive. (1)

The hermetic seal insures protection against future infection of the food by such organisms.

Thus, commercial canning is a method of food preservation which has for its basis the thermal destruction of spoilage organisms; no chemical preservatives are needed to insure preservation of the foods, and, consequently, none are used.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) The Microbiology of Foods, F. W. Tanner, Twin City Pub. Co., Champaign, Ill., 1932

This is the eleventh in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Committee on Foods of the American Medical Association.

Physical Education Becomes a Fundamental

By CARL L. SCHRADER
Supervisor of Physical Education
Massachusetts Department of Education

THE purpose of this address is not so much to plead for recognition of physical education, but rather to clarify on the one hand its meaning and purpose, and on the other, and perhaps mainly, to point out the erroneous conceptions and fallacies under which physical education in many places is still permitted to operate.* That the blame for this latter condition must be shared by school administrators as well as by the exponents of this particular field, is obvious. On the one hand we have the narrow, uneducational, and unsafe concept of excessive interscholastic competition, and on the other an array of high-sounding objectives to which the practice carried on bears no resemblance.

Just as it was not the purpose of forward-looking educators when bringing art and music into the school program to create other Michelangelos, VanDykes, or Beethovens, so was physical education not intended to create a lot of Babe Ruths or Tildens. The fact that we may, and as a matter of fact do, discern genius in any of these mentioned cultural fields does not alter the original underlying purpose, which I believe to be an opportunity for an apprenticeship upon which intelligent choice and habit may be built.

It is safe to say that those who conceive physical education as a way of living more fully and sanely are primarily interested in putting education into play and into athletics rather than putting play and athletics into education. Physical education so conceived, that is, recognizing the activities as merely the tools through which to obtain desirable educational results, must of necessity accept biologically basic facts and pedagogically and socially sound practices.

PHYSICAL education is primarily concerned with the building of organic vigor and power, and with the mastering of neuro-muscular skills. But it also makes valuable contributions to health, character, and to the worthy use of leisure. The primary objectives, that is, organic power and neuro-muscular skills, intelligently accepted, and the teaching and administration intelligently carried on, will make the contributions toward health, character, and the worthy use of leisure an inevitable and accompanying result.

"To think of physical education merely in terms of health would mean to center attention upon a corrective, rehabilitory, therapeutic, hospitalized procedure of a bygone age rather than upon the developmental, preventative aspect of modern physical education." One reason often advanced for stressing the health objective and even changing the name of physical education to health education, is that it is easier to obtain funds from the public to maintain such a program.

Expediency, however, should not deter us from enlightening the public on the deeper meaning of physical education. This expediency becomes particularly distressing when health education on the one hand attempts to teach as facts matters upon which the medical profession is still divided, and then to encourage on the other and tolerate practices which the medical profession as a body recognizes as detrimental to health and proper development.

WE, who are engaged in teaching or are administering teaching, are entrusted primarily with helping the child to grow. That is our function. This growth is a many-sided process, but having accepted the oneness of the human being, growth must be stimulated in every one of these directions. Just as we have recognized the mentally retarded and have found and are applying means of helping them to grow, so must we recognize the physically and socially retarded and use intelligence to help them to grow. One may think that because the physical lacks are so obvious, as compared with the mental shortcomings, that here at least we were doing our best. The fact that we are not is undoubtedly due to this very obviousness, which is misleading. Only when we recognize that physical growth goes on in segments instead of uniformly do we realize that outward appearance is no guide for functional vigor, nor activity achievement a safe device to determine organic power. We are, to be sure, thinking of the growing boy or girl whom we have in our schools, and not mature college men and women.

In the field of competitive athletics we still too often mistake bigness for organic power, when in reality the husky looking freshman entering high school may be a far greater risk in competitive sport than the smaller and leaner type. Biology teaches us that frequently in rapid growth in height and breadth the vital organs have not kept pace with this growth, and are therefore less conditioned to stand the great strain which some games and sports demand, particularly in competition. To drive or even encourage boys and girls in this condition to maximum performance is dangerous, and surely a gross violation of any health program so-called. The fact that such physically, and probably also pubescently, precocious individuals do not experience a breakdown while in school or within a few years after leaving school is no proof that they have not been harmed. Only too often do organic

*A paper presented before the Department of Superintendence of the National Education Association, St. Louis, Missouri, February, 1936.

weaknesses, traceable to early extravagances, manifest themselves later in life. Growing youth needs much of its energy for growing, and while intelligently guided activity, even to the extent of great exertion, stimulates this growth, exhaustion is positively destructive and inhibitive to this growing process. The element of fatigue is an important factor and the ability to recognize its warning and heed it is a fundamental requisite of the teacher entrusted with the physical education program.

If we could be but certain that the administrators in education, that is, the superintendents and principals of schools, recognize physical education, of which athletics is a part, as a means of achieving certain educational ends rather than look upon the outcome of a game or competition as the end, we might boast of the greatest youth movement the world has known. The educational ends here referred to are enhanced by the contribution which, rightly conceived and intelligently carried out, physical education makes. The obtaining of these ends in the main is the building of habits, either of health or character. Neither of these two can be considered subjects to be passed, nor can they be achieved through either lecture or textbook. Experience is the only teacher, and if we are correct in the assumption that habit is the result of frequently repeated acts, then we have reason to assume that many imbedded habits will function later when definite leadership and supervision cease.

THIS intelligent leadership in habit-formation is an obligation of every teacher, but teacher preparation as yet leaves much to be hoped for in this direction. Subject teaching is still the dominant note in spite of the accepted slogan that we must teach the child. We profess one thing and practice another. It is not the knowledge of health facts that fixes right living habits upon us, nor does the mere knowledge of the Ten Commandments or the act of saluting the flag make us the good citizen.

An activity program, therefore, full of real life situations, is most promising toward these desired ends. We recognize the advantage of activity in that it can be directed. We can set the one who is wrong right, and keep the one who is right, right, because we see him do the right or the wrong thing. We do not know what he thinks. We like or dislike each other because of what we do, not because of what we think. Hence we may well define character as a manifestation of deeds. Goethe expresses this thought in *Faust*:

> Talent itself in silence forms,
> Character but in the world of storms.

The play world in which youth lives contains these storms in all variations. Activity has been well-called one of the great hungers of life. Biologically this is of significance because activity means building of organic power.

No other field in education is so rich in variety of activity as is physical education. Classed with music as an art, it shares with music the significance of engaging the whole of man in its practice. The human body is the greatest medium for outward expression and commands the greatest variety of vehicles through which to do it. Who has not been thrilled as spectator by the marvelous and beautiful performance of the skater, dancer, skier, equestrian, runner, jumper, or player? Even illustrations give us that thrill. But this spectator thrill is as nothing compared with the thrill of the performer—a feeling that cannot be described but must be lived, must be experienced. Here is living, for moments at least, in ecstasy. The whole being throbs in this glow of achievement. This throbbing of life exists in all degrees and levels of efficiency and in a thousand varieties of activities, and may well be termed the conditioning of the inner man. To stimulate ambition toward these experiences is surely worthy of a place in education and surely is helping youth to grow. It is a growth not merely in ***knowing***, but in ***doing***; not merely in ***health***, but in ***total personality***. "What I am I have become; what I'm going to be, I am becoming."

In this button-pressing age, with only a remnant of the joy of achievement left in industry, the new freedom that comes with increased leisure must make up for this loss in the various cultural fields of hobbies. A teacher asked her boys in class what, if they were of an inventive mind, they would like to invent. One boy wanted to invent something where you press the button and you'd be all dressed in the morning; another to press a button and all your school work would be done; a third, the real product of our age, would invent something that would press the button. There remains, then, but the hobby, no matter in which field, whether it is a game to be played or a thing to be made, or music to be rendered, that may save man from a drab existence while he looks only to commercialized recreation for relief. Only self-effort and discipline, no button-pressing, will lead to the mastery of any hobby.

THESE desirable outcomes do not just happen, but can only be the result of intelligent leadership. That this leadership must be based upon more than mere techniques should go without saying, yet the fact remains that less care is exercised in the selection of teachers in this field than perhaps in any other. In selecting teachers or supervisors of physical education, the choice too frequently falls upon the man who is an All-American this or that, or one who has successfully placed this or that town on the map, but who has no professional qualifications whatsoever and consequently is entirely out of touch with educational objectives.

I cannot refrain from calling your attention to the outline of physical education in junior and senior high schools published in the Sixth Yearbook of your Association. It deals in detail with teacher preparation, teacher load, time allotment, program content, health teaching, health service, and competition. There is little we would change from that outline unless it were to stress still further the need for definite instruction for all, and less of the over-publicized championship type of program. We would also urge definite testing and measuring on the basis of test, teach, test, rather than only a test for classification purposes.

We can measure achievement in this procedure. How accurately? Well, perhaps as accurately as we measure

a good many other achievements. It does not follow that the teaching of activities must therefore become pedantic, but it does mean that the teacher of physical education must teach and not merely entertain—a fault much too common and not peculiar to physical education alone. The criticism which has been made that physical education is still arms and legs and good intentions is undoubtedly based on having seen *entertainers* at work rather than *teachers*.

IF IT should appear that this dissertation deals solely with junior and senior high schools, may I suggest that the errors in this particular school division are perhaps of greater moment than the omissions in the elementary schools. I refer to practices that are educationally unsound: interscholastic schedules too long, particularly in basketball; unbalanced matching of teams; lack of proper medical supervision; playing of night games; traveling long distances to determine phantom championships; and above all, interference in these supposedly school functions by non-school authorities. A real representative intra-school mass program cannot thrive where both space and the time of the teacher are monopolized by the few, usually an aristocracy of brawn.

Hence the need for shorter varsity schedules. The spirit of sportsmanship and fair play is not fostered by matching a David against a Goliath. A principal permitting a light team from a small school to battle against an admittedly strong and heavy team from a large high school with no hope for even scoring, and merely for a share in the gate receipts, has much to answer for.

Medical supervision at games for the mere purpose of patching up the injured player so he may go on with the game is futile and unprofessional. The same fellow suffering the same injury in the ordinary hazards of life, and treated by the same physician, would be treated far differently and receive advice for great precaution so as to avoid further complication. We need sports physicians who alone may determine who shall compete and when, and who will function not only at games, but who will recognize fatigue throughout all training and eliminate the boys accordingly.

While the evils in girls' athletics have as yet not advanced to the level of those of the boys, there is still ample evidence of overdoing to the detriment of the girl. Evidence brought out recently of increasing tendencies of tuberculosis in high schools, particularly in girls, has brought from the medical profession a word of caution to watch carefully the growing girl in her effort to shine athletically. The Women's Division of the National Amateur Athletic Federation, made up of professionally trained teachers of physical education, presents a platform for a vigorous yet safe play life for girls, which school administrators might well recognize as a guide. There is no sport, barring those demanding bodily contact, that the girl cannot under proper leadership follow with safety. We recognize and discern less difference today between the sexes than we do in individuals in either sex.

The art of dancing, like some of our games once the prerogative of the private school and college, has become firmly imbedded in our public school program. It is a field in which woman naturally excels, yet is not closed to men. There cannot be any arbitrary classification or selection of activities. Tastes vary widely, hence individual inclination need be gratified. The classification of sports into major and minor sports is a most arbitrary one, particularly when it is based on the spectator interest instead of that of the performer. A major sport or hobby is that in which the individual pursuing it finds the greatest stimulation and satisfaction. For one it may be swimming, another dancing, still another wrestling, and another tennis. Each represents a desire for expressing an inner urge, and who is there to dictate what this shall be? It is the teacher's task to help toward a better expression through an improved technique.

THIS brings us to the fundamentals which always lead out from kindergarten and elementary school. The play world elsewhere referred to becomes of greater significance in these pre- and elementary-school years. To kindle and keep alive imagination must be one of the means of helping the child to grow. We must recognize that the mental experience in early childhood is objective experience. Everything seen, felt, or touched is actively shaped by the child—is experienced with more senses than it is by the adult. Objects are actually experienced. The same object may in a brief period of time be a soldier, tree, or animal. The caught child becomes the mouse—the chasing boy the cat.

This should suggest that even at this age we are not merely dealing with exercises, but with a specific age need for growth that does not involve only muscle. Teaching materials here are close at hand. Strange as it may seem, the oldest games for this age level are the most popular and loved ones, due no doubt to the fact that though the games are old, the children are always new. Program content and leadership, then, is of very great importance at this stage of life, and omission or aimless operation is unpardonable.

Much as has been achieved in physical education as a whole, the elementary school concept of physical education is still a very vague one, not only in rural districts, but in many city and town systems. The notion of aimless and isolated body movements carried on between desks as physical education, still prevails. Better if need be to curtail the high school program and equipment in order to answer for the needs in our elementary schools than to carry on this present mere skeleton, void of flesh and of life blood.

IT requires no argument to claim that the contribution by physical education to worthy use of leisure is a very definite one. Play in its broadest meaning always has been and always will be an important factor in the leisure of a people. Like all other leisure-time activities, this too requires an apprenticeship for all, so that all may share actively instead of in the role of mere spec-

(*Continued on Page 283*)

Gypsying by Way of American Youth Hostels

By

MABEL LEE

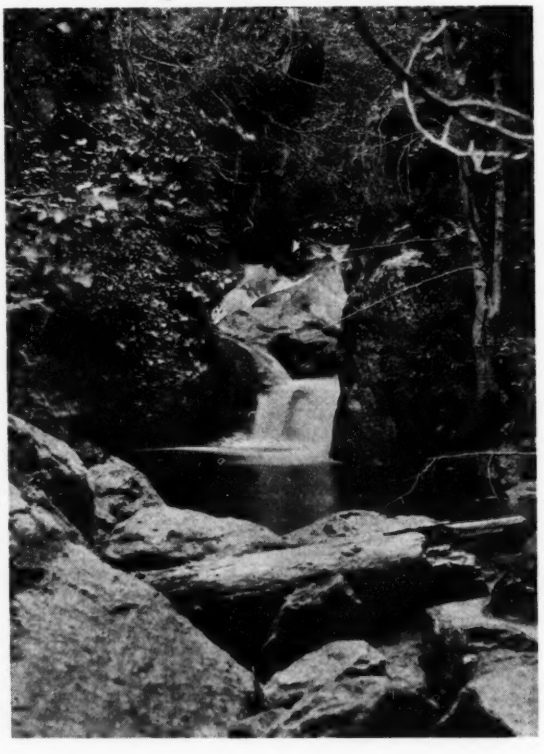
Director of Physical Education for Women,
University of Nebraska

> I wish we might go gypsying, dear lad, the while we care—
> The while we've heart for hazarding,
> The while we've will to sing,
> The while we've wit to hear the call
> And youth and mirth to spare,
> Before a day may find us too sad for gypsying,
> Before a day may find us too dull to dream and dare—
> I wish we might go gypsying, dear lad, the while we care!
>
> —THEODOSIA GARRISON.

GYPSYING? Yes, why not? There is all the more reason now that the Youth Hostel movement has come to America! The word "movement" I use in spite of the insistence of the American Youth Hostel Association itself that it is not a *movement* but a *facility*. Its eagerness to disclaim itself as a movement is whimsical in the light of its praiseworthy efforts to set high standards of conduct for youth as evidenced by its motto "Not for Myself, but for the Group." Among its rules are such as these: "No smoking or drinking in Youth Hostels," "report in to the chaperon no later than eight o'clock," and "quiet and lights out by ten." Moreover it makes easy an arrangement by which, upon departure from a hostel, one's pass may be withheld by the chaperon because of any infraction of rules or misbehavior in her judgment. Beyond these standards, it is true that there is the primary objective to furnish inexpensive lodgings for youth so it may journey about the land with costs at a minimum, receiving the great educational value of seeing new places, meeting with peoples from many different parts of the country, exchanging views with strangers, enjoying the comradeship of newly found friends, and acquiring a love of nature through close contact as they hike or "bike" mile upon mile from one hostel to another.

Having for years enjoyed "roughing it" for a part of each year, and being in a position of supervision over hundreds of college girls, I felt an urge to seek out these hostels for first-hand experience of them, so that I might bring back to these girls the inspiration to avail themselves of the opportunity to see life in this new and splendid way. Accustomed to charting my own travel experiences after much study of available literature and much letter writing following up all possible leads, it is gratifying to contemplate the ease of adventure that is laid at the feet of today's youth through the Youth Hostels. To one who has slept out in the open on balsam boughs on the Pacific coast, and who has spent a Christmas vacation in a mountain summer resort hotel snowed under to its gable peak and accessible only through tunnels in the snow, with none but the caretaker and his wife for companions and the whole mountain to ourselves for each day's snowshoeing; to one who has crossed every pass in Glacier National Park on foot, with a pack on her back, who has followed some of the most interesting trails in the Rockies of Colorado, who has climbed Mt. Snowden, the highest peak in the British Isles, and who has done many a happy mile of the Long Trail in the Green Mountains, by night sleeping on a shelf in a partially walled-in shack and by day carrying sleeping bag, change of clothing, food, cooking utensils, and poncho on her back; to one raised in the Middle West far from mountain trails, yet who felt life most incomplete without such experiences—to such a one it seems a calamity to see college

Inviting are cool falls such as this.



Beckoning horizons.

generation after college generation pass by without receiving in some way an awakening to the joys and values of hiking and of roughing it occasionally.

We Join the Youth Hostel Association

And so having read the few brief articles that appeared last year about the American Youth Hostels, I applied to the headquarters at Northfield, Massachusetts, for a pass. When it came I eagerly read every word of the woefully meager literature sent with it. It was inspirational but most inadequate for anyone who might be a novice at either hiking or biking. And since its very name uses the word "Youth," one might rather expect it to be making its chief appeal to young people. And they, for the most part, are novices at such adventuring. But having already adventured and gypsied in far-flung places, the lack of information was not a personal handicap. So having found a genial companion and procured a hostel pass, I ventured forth on this new experience.

For the most part the hostelers we encountered, or heard of through others, were from Massachusetts, New York, Connecticut, and Pennsylvania, with a scattered few from Ohio. My own Nebraska registration always caused a flutter in the hostel for it "set the record" for the season. One native, when he heard I was from Nebraska, looked at me in open-mouthed wonder for a silent moment, and then regaining his tongue exclaimed, "From Nebraska! My Godfrey!" 'Twas difficult to make those Yankees realize that at that I had come only half way across the Continent to get there.

One imaginative hostel mother had asked her hostelers to write the names of their schools in the registration book, and when we arrived late in the season, we found a goodly sprinkling of college names such as Mt. Holyoke, Yale, Smith, Vassar, Dartmouth, Wellesley, and New York University, as well as a sprinkling of names of high schools of large eastern cities. The largest total registration for the season at any hostel at which we stopped was well over one hundred, with a rough estimate average of three or four per night. As the movement spreads, or shall we say as the *facility* grows, there will no doubt be large groups at a hostel at the same time—groups journeying together as well as groups hailing in from the opposite direction who will spend the night under the one roof and go their separate ways in the morning.

We Venture Forth

It was after dark when we arrived at the farm a few miles out of the New England village which we had selected for our first hostel. We had been watching eagerly for the AYH triangle which our pass informed us would be hanging outside the farm. As we had turned on our

A rustic cabin nestled in the hills.

The Mary E. Wooley Youth Hostel on the Mount Holyoke Campus. This venerable New England house is a friendly haven, close to woods and fields.

spotlight at farm after farm and found no triangle, we began to wonder if we had taken the wrong road. Yet the boy in the restaurant in the village had seemed to be giving us very careful directions and we recalled his assurance that he knew of the farmer and his wife. At last we came upon the place and drove around to the kitchen, directed by the one light that was burning.

Timidly, for it was our first experience at presenting our passports at a hostel, we knocked. As the door opened we sang out almost in chorus, "We are hostelers and have come to spend the night," the words accompanied by much accent on the business of holding up the passports. At the look of surprise that greeted us, we hastened to assure the hostel mother that the reason we were breaking rules by arriving in a car was because we had come by automobile from Nebraska and wished to start our hiking from her farm. That seemed to satisfy the doubts, for the door was opened wide and we were given a friendly welcome.

We were disappointed to find no other hostelers there, although we learned later this was the first time for many weeks when there had not been others. We were eager to ask our fellow travelers how they had found the trail from the last hostel and to ask for advice and directions before starting out on our first day of adventuring. But the hostel mother entertained us by showing us the registration book and proudly displaying a few of the letters she had received from "her" hostelers, both boys and girls, who had written to thank her for her interest in them and to tell her a little of their later adventures. After chatting by the kitchen fire for a while, we asked to be directed to the hostel bunk room wondering where it might be amidst the long line of sheds and barns attached to the house in the usual New England manner. But we were met with exclamations and emphatic assurances that we were to sleep in the "spare room." Perhaps our prematurely gray hair made us show too obviously that we were at the stage "where life begins" and so precipitated the decision! And I am not too sure it was not that, perhaps, rather than the motor car which caused the original wavering at the kitchen door.

For ourselves, however, there was no faltering in our refusal to accept special considerations, for had not the AYH literature said something to the effect that anyone between the ages of four and ninety-four who has a love for adventuring is eligible to join the association? And were we not between the ages of four and ninety-four? Did we not possess a love of adventuring? And were we not quite physically fit to tackle any hike between any two hostels on the list? And, better still, had we not adventured enough in years past to know now, as few *young* hostelers know, how properly to hike—meaning by that healthful food, hygienic dress, energy-conserving pace-setting, and safety procedures? We entertained no doubts concerning ourselves, but obviously our hostel mother did. What our hostel father thought was quite beyond us, for at our entrance he withdrew behind an impenetrable veil of silence and refused to come out in spite of the many questions directed at him in an effort to get his opinion of this Youth Hostel Movement.

We Sleep in Hostel Quarters De Luxe

But back to the "spare room." We were led through a long row of rooms, for it was a large rambling farm house. Finally we emerged into the "spare room," resplendent in its blue silk bed coverlet and large white fur kitten with a ribbon tied in great blue rosette around its almost true-as-life neck.

Knickers and hiking boots and flannel shirts were decidedly out of place there. We protested, insisting that we wanted to be true hostelers and would sleep only where the other hostelers had slept. But still our hostess was skeptical. We finally compromised on one of the "everyday" bedrooms upstairs. But we were adamant in our determination to start out right in some directions, so we refused to use her sheets and pillow cases but instead made up the bed with our own which we had carefully stowed away in our knapsacks according to instructions.

The hosteler furnishes a sheet, made up into a sleeping bag, and the hostel, for the sum of twenty-five cents per night, provides a roof over your head, some sort of a bed and blankets, fuel and cooking utensils, and a place to cook your food. This is the price in foreign countries and no doubt a real attempt is being made to keep the price, as well as the idea, universal. But certainly as things were organized at some hostels last summer, the hostel parents stood to lose financially on their venture at such prices. The right kind of hostel parents must be encouraged to carry on at all costs if the movement is to give to the youth of America what the founders hope for them. If, occasionally, a hosteler chooses to sleep in the privacy of a bedroom in the farm house or village home, there being opportunity at a hostel to so choose, should he not pay more for his night's lodging than do those who stay with the crowd in the hay loft or bunk-room? And should not the hostel parents be allowed to charge more for such extra comforts whenever they are accepted by some hostelers on occasion? No doubt these problems will soon solve themselves if the hostel movement continues to avail itself of farms and village homes here in America in lieu of actual hostels such as exist in foreign countries.

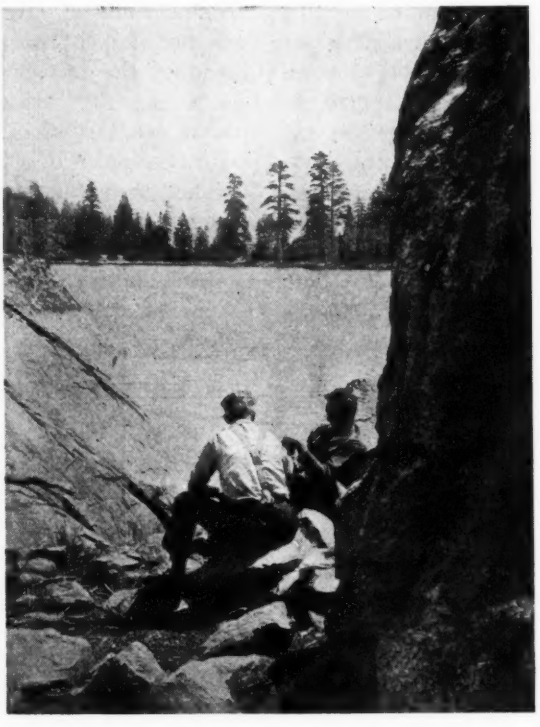
Having arranged the night before to have breakfast at the farm, it was an easy matter after breakfast to go a step further and ask for a lunch to carry in our knapsacks. It was such a bountiful one that it lasted for two days with a little bolstering by chocolate bars. We made arrangements to leave the car at the farm. Since there was no marked trail other than the main automobile highway, the farmer's wife gave us specific directions concerning the "back road" to the next hostel. We packed our knapsacks with the essentials, with emphasis on extra woolen hose and a small first-aid kit, and then weighed them to satisfy the fancy of the hostel mother who had us wait until she got out her scales, so interested was she in our gypsying. Then with knapsacks swung to position and with walking stick in hand we were off with seventeen miles of "back road" between us and our night's rest.

We Take Up the Gypsy Trail

And what a gypsying it was! Long stretches of lonely country road and great expanses of silence with an understanding companion! The rhythm of a long swinging stride and the pulse of nature caught in rustling grasses, whispering leaves, and an occasional scurrying animal! The hush of a quiet countryside interspersed by an occasional meeting with a horse and ancient carriage and its usually lone occupant who, though with kindly eyes, always gave but a taciturn "Good day." The day wore on all too fast. There were the foot prints to follow and speculate about, especially one curious set of imprints in the dust of the road—the small heel mark, the sharply pointed toe, the imprints coming closely together proclaiming that some maiden in high heels was venturing

Top: A farm and a camp hostel, with hostel fathers and mothers. Below: the welcome sign; rustling grub outdoors.

forth ahead of us mincing along in company with some two-legged animal whose tread clearly spoke of broad toed shoes, rubber heels, and a long free stride. But 'twas the maiden's trail that puzzled us, forever one foot traveling in our direction and the other headed back the other way. We finally decided she was one legged and had not only passed by that way, but had returned just before our appearance. Then there were the brief stops to hang over a fence and shout to the farmer in the field asking how far it might be to the next village. That question was always a safe lead for an excuse to chat along the way. From the menfolk it elicited merely the briefest of replies; but not so from the women and children. There was one delightful pause to let some children show us their bear which was chained to a post near the barn. It stood up on its hind legs and walked for us, causing deep regret that the knapsacks held no sugar.



At one wee village we had an engaging chat with three small boys swinging on a great gate. Finally they fell to such giggling over our attention to them that one of them fell off and rolled in the grass in his laughter while his two companions urged us to pay no attention to him for as one exclaimed in sudden inspiration, "He's just crazy!" Every deserted farm house, and there were a few, was an invitation to prowl a bit for no better reason than just to see what we could see, though one doesn't need logical reasons for anything when gypsying. Then there were the burial grounds where, with the knapsacks laid aside, we roamed about reading the old inscriptions. And, occasionally throughout the day, we took time out to stretch flat on our backs in an inviting meadow sun patch to rest as we idly watched the fleecy clouds drift by. At other times in a shady nook back from the road we snatched a hasty cat-nap, or at least a ten-minute relaxation, with eyes closed, even if still awake to the scurrying of squirrels overhead and the mid-day call of birds. Then off the road and up a steep bank we clambered to eat our lunch, looking down on the quiet countryside with the rush of automobiles far away on the main highway and the faintly noisy pull of a freight train chugging up the valley.

Mid-afternoon brought us to a small village. As we spied its church spire in the distance, we quickened our pace at the thought of finding a tea room, but when we arrived we were brought to the stern realization that we were in New and not Old England. Our great anticipation for afternoon tea in some cozy cottage was transmuted into the realization of an ice cream soda at the drug store —general store—post office. But it was not without its compensations, for the manager proved a friendly host and knew the countryside well enough to give us very detailed instructions for the rest of our journey. Fortunately, he knew the very farm where we were going and warned us of a certain inconspicuous turn in the road which we should take to save us a number of roundabout miles.

Once arrived at that turn, we were soon confronted by the real discipline of the day, a very steep climb to the farm, which was nestled in a beautiful spot on a plateau high above the surrounding country. As we seemed to be receding farther and farther from civilization, with the road narrowing into one showing signs of little use, we would have been sure we had lost our way had it not been for an occasional AYH triangle painted on a post to give us assurance.

We're almost there now!

The Wayfarers Join the Family Circle

But at last we came upon the friendly farm and found that our passports were magic bits of cardboard admitting us to the charmed family circle. Preparations for supper were in progress and they gladly "put our names in the pot." It would have been a calamity if they had found it inconvenient to do so, for the nearest village was far beyond, and to us, foot-weary as we were, it would have seemed an endless journey there and back for the night.

The thoughtful hostel mother soon had a teakettle of hot water ready for us and a sponge bath followed by a good soaking of weary feet drove away fatigue by the time supper was ready. And what a supper, with places set for the farmer and his family, consisting of his wife, their son, the farmer's assistant, augmented by his wife's sister and her husband and small son who were visiting from Pennsylvania, and two extra places for us "hostel-

ers" who had dropped in for the night. With New Hampshire, Pennsylvania, Ohio, and Nebraska gathered about the table there were no lulls in the conversation as eager questions flew about the board. Just as the meal was over, two other hostelers arrived, two charming-mannered high school lads from Connecticut. They introduced themselves to the hostel mother and she in turn introduced them around the circle. As they learned that two of us were also hostelers, they stepped across to us with outstretched hand and gave such a hearty grip that we felt we had surely been initiated into some secret clan. As the dishes were being washed, the two boys prepared their supper of weenies and toasted buns at the fireplace in the dining room and as they ate we "hostelers" exchanged news of the trails. Suppers over and dishes done, a fresh log was put on the fire. The dining table was pushed back and we all gathered about the fireplace for a final chat before the long rest for our wholesomely weary bones.

Bed time at last and the question arose, "Where do we sleep?" Again there was assurance that we two women should have a bed in the house. Protestations that they had guests and most certainly no room for us were followed by assurances that there were always ways to make room for more. This was met by a firm refusal to accept such hospitality and then came the question, "Where do the hostelers sleep?" So it evolved that we were to choose between the loft in the cow barn or one of the many lofts in the hay barn. The two boys gallantly informed us that we had best choose the hay barn for they had heard some hostelers say that the cowbells disturbed their sleep. But we refused to choose the best for ourselves, so the hostel mother suggested that both parties sleep out in the hay barn. And so it was settled. The others eagerly asked us two women if we had ever slept in a hay loft before and we had to acknowledge our utter lack of experience. Whereupon four of the farmer's family gleefully volunteered to help us select our loft for the night and to show us how to make a hay bed.

Armed with many blankets, for it was drizzling and the mountain side was chilly, the eight of us made a strange procession as we filed along behind the flashlight out to the huge barn that stretched out interminably into the darkness, its great roof slanting almost to the ground at one end. Arrived, there was another momentous decision confronting us. Which of the lofts would we choose from the many rising from the great center aisle with its vast opening out into the black night? The charming-mannered lads true to form insisted that we have first choice. With a hint from the exuberant young visiting nephew from Pennsylvania who said that Gee! he wished he could sleep out there—he sure would choose that one way up there, high up, on that side—the one nearest the roof, we made his wish our resolution. Then the boys decided to take the one on the same side but on the lowest level down by the door.

We Make the Most of It

What a lark it was! We climbed up the ladders to reach our chosen heights, carrying knapsacks, bedding, and flashlights. Then the farm folk taught us how to shift the hay about to make a trough for our bodies so we wouldn't slide down hill and how to make a head rest that would really hold up through the night. Then over the hay we spread a horse blanket, then an army blanket and two extra to roll up in after we had crawled into the sleeping bag of sheeting which we carried in our knapsacks. Satisfied that we would be comfortably fixed for the night, the party moved down to the lower loft to look after the two boys. Soon they departed and in no time the upper loft was settled for the night but the lower loft got the giggles. From fragments of remarks that floated upward in the darkness, it seemed that one of their sleeping bags had ripped and seeing no light flashes it was apparent that they were attempting to straighten out matters in the pitch darkness. So I called down, "Want a flashlight?" and received an "Oh! Thank you! Yes!" whereupon I fumbled about in my hay pillow, extracted my little flash lantern, crawled out of my cozy nest and creeping over to the edge of our loft, dropped the lighted flashlight over into the vast stretch of soft hay below. A little light on their difficulties soon settled matters and quickly there came a loud stage whisper, "Want your light back?" which was answered with "No, we've got another" and then a moment's silence before there came from the lower recesses of the darkness, "Goodnight—hope you sleep well!" followed by a rather sheepish, "Goodnight!" from up near the roof—sheepish to think it was the lads rather than the grownups who had brought their charming manners with them to the hay loft. Then hours of silence as one American Youth Hostel was lulled to sleep by the gentle patter of rain on the barn roof above us.

'Twas a glorious experience in gypsying, even if one member of the party did lie awake for some time wondering if that squeaking noise close by meant mice in the hay or birds in a nest in the eaves or if that occasional sudden queer feeling of something falling on the cheek and drifting along to a ridge in the nose or on to the forehead or neck meant a rain drop that had squeezed through some leak in the roof or a spider that had tired of its web above. In the interest of peace in a dark, dark world, a firm decision was reached that the noise meant barn swallows and the queer feelings about the face meant rain drops, so that at last she "drifted gently down the tides of sleep." Daylight brought the uncomforting sight of great webs suspended overhead, and a two-weeks nursing of some sort of insect bites scattered over the face and neck only added to the "post mortem" decision that it had *not* been rain drops. However, next morning the farm hand assured us that there were barn swallows in the eaves and that they do sound like mice as they keep up a rather constant squeaking and flouncing about in their nests throughout the night.

It was still drizzling as we awoke. We gingerly sat up and surveyed our huge sleeping place—gingerly, for we were sure we were going to be stiff from our seventeen-mile hike of the day before followed by a night in a hay loft. But no, we were not sore yet—not that we could

(Continued on Page 276)

Health and Physical Fitness

From the Standpoint of the Physiologist

By

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THAT moment which marks the entrance of the spermatozoon into the mature ovum is the most important moment in the life of the individual whose career begins with that event.* The forces of heredity, at play since the beginning of life on this earth, have just dealt a new set of heredity-bearing particles with which this individual must play out his life. This morning we are observers and critics of the *game* and the *player*. We take the cards for granted. As social scientists our interest centers in the *game;* as biologists we are intent on the *player;* as instructors, coaches, and directors we are educators—absorbed in *both*. But we have learned the law of the telescope—in order to extend our knowledge we must focus successively on limited portions of the sky. Our profession, like others before it, has grown to the point where progress toward fuller understanding and more rational procedure depends on finer analyses to fill in the detail pattern of our more general, earlier views.

In selecting for emphasis the intensive examination of our objectives—health and physical fitness—this Institute adds momentum to a movement already begun in several quarters, a movement to understand and re-define our objectives with the aid of modern science. I have been invited to offer you a glimpse of the major constellation, "health and physical fitness," through the telescope "physiology."

But though objectives, like stars, help us to get our bearings and furnish us with inspiration, our real interest is the health and physical fitness of the individual player who in my opening paragraph was started with a new deal to *play his game* of life.

And now I realize, only too late, that my analogy should have employed the microscope, the test tube, or the dynamometer instead of the figure of the telescope. Physiological health has been defined by Professor Nash (1935) as "the ability of the body to sustain adaptive effort," which to him includes such concepts as "body power, vitality, ability to resist fatigue, and fitness," while physical fitness has been more narrowly defined by Professor Rogers (1932) as "capacity for purposeful physical activity or voluntary conflict with the natural forces of gravitation and inertia." A third note in this chord is Professor McCurdy's recent statement (1935) that a real test or measure of physical condition can be obtained by using endurance as the criterion of condition. The common element of these three statements is their emphasis on a quantitative standard expressed in the terms "to sustain," "capacity," and "endurance."

The best definition of progress known to me says that it is *distance from destruction*. In the same sense I think health is *distance from death*. Man is in constant conflict with the destructive and deteriorating forces of his environment. He must constantly adapt himself if he would survive. The margin of safety which he is able to maintain in making this adjustment is then an index of his health. To be more specific: his resistance to tuberculosis is the amount of exposure to the disease which he can ward off or "live down"; his strength is measured by the intensity of the physical force which he can overcome; his endurance, by the amount of work he can perform before fatigue overtakes him; and his speed, by the distance he can cover in a unit of time.

Since I intend to employ such a quantitative definition of health and physical fitness, it may be wise to discuss some of its implications. It is one thing to define health and physical fitness—another to tell how to develop or how to measure it.

To define health may require insights and some ability to analyze; to know how to develop it requires long experience accompanied by skillful and continuous observation, with ability to distinguish between relevant and irrelevant causes; but to measure it adequately, and to predict performance requires, in addition to all these skills, also a large measure of genius. I am glad that my task lies in the first, or simplest, division. If by chance I invade the second territory, it will be following the physiologist's instinct, which demands that he see mechanisms in action, in process of growth or development. May I propose that health and physical fitness are composed of three ingredients, namely, *resistance to disease, strength,* and *endurance*. I will discuss them in this same order.

Resistance to Disease

Under this category, perfect health would mean immunity to all contagious diseases, and persistent refractoriness to the inroads of the degenerative changes which come with the passing of time. To imagine such a combination of resistances to exist in any one person is not too difficult. Already each of us is resistant to certain infections, be it boils, diphtheria, pneumonia, or appendicitis, and surely some of us would find it impossible to develop cancer, diabetes, hemophilia, or high blood pressure. There are racial strains in our population who,

* This paper was read before the Second Annual Institute on Physical Education, sponsored by George Williams College, Chicago, Dec. 5, 6 and 7, 1935.

(Note: Works cited throughout will be found listed in the Bibliography at the end of the article.)

in wholesale fashion, enjoy virtual freedom from tuberculosis, hookworm, malaria, insanity, or obesity. If we can imagine a process of selective breeding and interbreeding which will continue all these desirable characters and eliminate the others, for many of them are known to be inheritable; or if we could in other ways, as by injecting sera or vaccines, or by controlling the environment, with its stresses, strains, and bacteria, or by modifying the activity of the glands of internal secretion which are increasingly gaining recognition as controlling agents, bolster up the imperfect inheritance; then we can imagine the production of this Number One disease-resisting human being. It would probably be more difficult to imagine a respectable way of terminating the existence of such a person.

Muscular Strength

Let us for the moment divest this term of its popular-health-magazine and dumbbell-lifting connotations. It remains the *sine qua non* of man's effectiveness on whatever plane of existence you choose to evaluate him. May I quote a writer who has expressed this viewpoint perfectly:

> The muscles are by weight about forty-three per cent of the average adult male human body. They expend a large portion of all the kinetic energy of the adult body . . . The cortical centers for the voluntary muscles extend over most of the lateral psychic zones of the brain, so that their culture (the culture of muscles) is brain building. In a sense they are the organs of digestion. They are in a most intimate and peculiar sense the organs of the will. They have built all the roads, cities, and machines in the world, written all the books, spoken all the words and, in fact, done everything that man has accomplished with matter. If they are undeveloped, or grow relaxed and flabby, the dreadful chasm between good intentions and their execution is liable to appear and widen. Character might be in a sense defined as a plexus of motor habits. . . .
>
> To call conduct three-fourths of life, with Matthew Arnold; to describe man as one-third intellect and two-thirds will, with Schopenhauer; to urge that man is what he does or that he is the sum of his movements, with F. W. Robertson; that character is simply muscle-habit, with Mandsley . . . ; that history is consciously-willed movements, with Bluntschli; or that we could form no conception of force or energy in the world but for our own muscular efforts; to hold that most thought involves change of muscle tension as more or less integral to it—all this shows how we have modified the antique Ciceronian conception *vivere est cogitare* to *vivere est velle* and gives us a new sense of the importance of muscular development and regimen.

Writing in this neo-psychological age, I might today select a few different words, but I am sure that I could in totality not equal this masterful statement by Professor G. Stanley Hall (1904) written over thirty years ago.

The pulling ability of a muscle is its strength, or, more technically, the *tension* it is capable of developing. The maximum tension of which it is capable is only developed when its shortening is resisted. If the object offering resistance is lighter than the maximum tension, the muscle shortens and performs *work* which is expressed in foot-pounds as the product of the *weight* or *load* times the *distance* through which it is drawn. If the event is timed and the accomplishment expressed in foot-pounds per second, we are dealing with the power concept. Thus 550 foot-pounds per second is the horse-power unit. Obviously our physical effectiveness is always a function of *time* as well as strength and distance and so *speed*, the third factor in the Power Trinity, forces itself to our attention. To understand more clearly these factors and how they are combined to serve purposes, it will help us to examine some recent discoveries in the field of neuromuscular physiology and histology.

The biceps muscle in man is composed of about 260,000 discrete cylindrical muscle cells or fibers, each about 1¼ inch in length and 1/300 inch in diameter. To continue further on factual foundation we must draw from experiments on cats. Here Clark (1931) was able to show that such a muscle as the *extensor digitorum longus* in the cat, which contains a total of 54,450 muscle fibres, receives its innervation over 330 motor neurones. Since each muscle fiber is entered by a tiny nerve twig, it is apparent that each motor neurone governs about 165 muscle fibers. Such a motor neurone, whose cell body lies in the spinal cord, ready to receive nerve impulses from other neurones, whose axone lies with many others, as strands of the sciatic nerve, such a neurone, together with the 165 muscle fibers which it supplies after frequent branchings, constitutes a *motor unit*. This term was coined by Sherrington in 1925 (J. F. Fulton) and has come to take an important place in our conception of neuromuscular functioning.

The work of Eccles and Sherrington (1930) has shown that in the *extensor digitorum longus* of the cat each motor unit delivers 2.8 gms. of tension, while a single muscle fiber is capable of developing a pull of 17 milligrams. These are the figures for a muscle "twitch" when the motor unit carries only a single nerve impulse (an electrochemical disturbance of the nerve lasting about 3/1000 of a second). If two such impulses follow in rapid succession, the pull is increased. When the impulses come at the rate of 50–70 per second, the motor unit delivers its maximum, which in their experiment was 8.6 gms. for the unit, or 48.5 milligrams for each individual muscle fiber. If this tension is not enough, and it seldom is, then more and more of the 330 motor units are brought into action. A muscle delivers its maximal pull when all of its motor units are innervated with the maximum number of nerve impulses which the motor cells are capable of developing. For man this figure seems to be approximately 50 per second (Lindsley 1935). From moment to moment, then, the tension in a muscle may be varied, first, by changing the number of motor units brought into action, and, second, by changing the number of nerve impulses coursing over each unit per second. (You will recognize that this new interpretation demands some modification of the "all or none" theory as formerly taught.)

Each muscle fiber may, if not resisted, shorten to approximately one-half its relaxed length and thus, by pulling a load through a measurable distance, perform work. (Work = Load × Distance). Now, if in two successive pulls the load and distance remain constant but the tension or strength is increased, the work will be done

more rapidly. Thus speed depends on strength. This is just another way of saying that a strong man can lift a weight more rapidly than can a weak one, or that the strength of the motor limits the speed of an automobile. But strength and speed are not exactly proportional to each other. It takes more than a doubling of strength to double the speed. This is because of the fact that a portion of the strength must always be devoted to overcoming the viscosity, or internal resistance to change, in the muscle itself and the viscosity factor increases rapidly as the time of shortening is reduced; thus more and more of a muscle's strength is devoted to changing its own shape as the speed of contraction increases.

In this connection Professor Fenn (1931) has published some interesting facts. He found that with every 10 per cent increase in speed an additional 3.1 per cent of the muscle's tension was devoted to overcoming its internal problems and therefore lost for external work. From movie films of very good runners, he calculated that the *biceps femoris* muscle during the backward swing of the leg just before the foot left the ground was shortening at the rate of 373 per cent of its length, or 58 inches, per second. At this rate the muscle used its entire strength to overcome its internal resistance and that is why the runner could not further accelerate his speed. In other words, his top speed is attained when all of the strength is used to overcome viscosity. This viscosity factor serves, no doubt, as a safety device, for if a muscle pulls too rapidly on a bone it may break itself, its tendon, or even the bone to which it is attached. There have been reported the cases of several athletes in whom repeated tendon injuries were probably attributable to too low a viscosity, which permitted them to move too fast.

We have considered speed and power as functions of strength, but power without *control, direction,* and *timing* is useless. The high jumper who clears the bar at 5 feet has about 4/5 seconds time from ground to ground in which to perform the many fine adjustments, each of which must come with the right degree of speed and strength, at precisely the right hundredth of a second, in the series of events which together constitute his form. The central nervous system can be trained to unbelievable limits in controlling and timing the number and combination of motor units to be called into action as well as the exact number of impulses to be sent out over each.

Professor Harvey's (1931) description of a baseball pitcher in action is a startling account of complex coordination. (I have changed a few words in accordance with our present-day understanding as outlined.)

When a baseball pitcher stands on his feet and throws a ball from his hand, he uses parts of almost every muscle in the body—some in the legs and trunk to produce and hold the desired position and others in the arms and hands to throw the ball. When he wants more force (strength or tension) he calls on a few thousand more motor units that he has not been using in pitching slower balls or he increases the rate with which those already used were bombarded with nerve impulses. Some of the extra force is furnished by arm muscles, but much of it comes from legs and trunk. He can combine any part of each with any part of all the others. As the pitcher goes through the successive stages of his pitching motion, the parts and combinations change in progressive order: now he winds up—then the right leg muscles throw him suddenly forward with full force—then the right shoulder muscles swing his right arm, ending with a final spasm of all the power of the pectorals as the arm muscles gripping the ball through their finger tendons make the throw. Incurve, outcurve, or drop curve?—the arm muscles do it in the last tiny fragment of a second. Then they stop suddenly. The pitcher has let go of the ball; it has just the right speed and just the right spin on it for sixty feet away it curves over the inner corner of the plate exactly where the catcher signalled him to put it. Seconds are much too long as a time measure in the game. The pitcher can shift his muscle action forty times a second. The delivery of no two pitchers is alike; each has worked up his own style. It is the result of particular combinations of muscle fibers. . .

There are billions of possible combinations. Each of us learns by his own experience in infancy and childhood what combinations of fibres he likes to use to get any desired motion, and no two persons use the same ones. That is one reason why signatures identify people. No two persons write the same word in exactly the same way. We change combinations constantly as we move. We can change them forty times a second. We play on our muscles as an organist plays on his organ. He strikes successive keys from all over his keyboard and has learned by long practice what combinations make harmony. We have learned by experience what successive combinations of motor units make harmonious movement.

To pitch a baseball with accuracy at a speed of sixty to eighty miles an hour or to execute a high jump at five feet and more is, of course, a terrific feat of skill. Skill is not up for consideration today. I have used these examples because they illustrate health and physical fitness as much as they do skill. Such skill patterns cannot be developed in a sluggish nervous system or with weak, slow-acting power units. The ability to perform such acts is predicated on health and at once positive proof of its existence. It is a performance test.

Rogers (1934) has reported a 22 per cent reduction in strength of hand-grip muscles due to an attack of influenza. The slowing of reaction time and the faulty coordinations following even small amounts of alcohol are well known. Mauerer and Tsai (1929) have associated the maze-learning utility of adult rates with their vitamin *B* intake in the early weeks of life. Professor Donaldson (1932) has found correlation of the intelligence of human beings with the number and size of the blood vessels in the delicate pia mater covering the brain. Senile dementia is primarily due to a defective blood supply to the brain. Such observations as these, you will agree, bear witness that strength, skill, and even human intelligence rise or fall with toxic conditions and nutritional states, thus betraying their close connection with bodily health.

In this connection you will pardon a brief digression to introduce a comparatively new discovery which has come to be called the "Orbeli effect." In 1929 Professor Orbeli of Leningrad displayed before the XIII International Physiological Congress in Boston his tracings which demonstrated a new role of the sympathetic nerves

in the functioning of skeletal muscles. That every skeletal muscle, in addition to its innervation from the central nervous system, also has a sympathetic nerve supply had been recognized for many years. Some said these nerves supplied only the blood vessels, others elaborated theories ascribing the maintenance of tonus to them. Professor Orbeli found that when a repeatedly contracting frog's muscle was beginning to show weaker contractions due to fatigue, a stimulation of its sympathetic nerve supply would strengthen the contractions, causing them to simulate in strength their unfatigued predecessors. Recently Tiegs (1934) has shown that during such an "Orbeli effect" there is liberated in the muscles and found in the blood draining from the muscles, a substance which, when perfused through a frog's excised heart, makes it beat more strongly and more rapidly. A small dose of adrenaline has the same effect. Others, notably Loewi, and more recently Cannon and his collaborators at Harvard, had already shown that sympathetic nerves, when stimulated, secrete from their terminals an adrenaline-like substance. Tiegs' experiment definitely shows that the Orbeli effect is of the same stripe.

Unfortunately, much of Professor Orbeli's work is published only in the Russian language, so that most of us cannot read it. He told me that sympathetic nerves not only influenced the activity of skeletal muscles but that he had evidence from modifications of reflex irritability that similar nerves entered the reflex centers of the central nervous system there to modify the activity of the synapses themselves. If this is so, we can picture the sympathetic nerves secreting minute but highly potent substances into the several "joints" of the neuromuscular system in cord, muscle, and perhaps even the brain. To this substance Cannon has given the name "sympathin," and he believes to have shown that it exists in two forms: sympathin *E*, which excites, and sympathin *I*, which inhibits. (The present status of our knowledge of these neurohumors has recently been admirably reviewed by both Dale (1934) and Cannon (1935). From such facts as these one is tempted to let his imagination wander a bit. Are the increased strength of desperation, the utter weakness of fear, and the many other modifications of strength, as in sudden pain, in a laughing spell, or in digestive upsets, which come and go with but a moment's notice—are these perhaps the signs of a meddling autonomic nervous system incited to such action by insult or injury in some distant organ? Certainly we shall eagerly await the light which further researches in this area may cast on the physiology of strength in its many aspects.

Endurance

Up to this point we have given attention only to the body's great "spendthrifts." The muscles are the expenders of energy. The faster or more powerful their contractions, the greater is this expenditure. We have said that such expenditures are a sign of health and physical fitness. Obviously this is true only if expenditures are constantly balanced by income, so that expenditures may continue. Still another condition must be stipulated. Active muscles produce waste products, notably heat, water, and carbon dioxide. These must be removed promptly, lest they "clog the works." To put it another way, oxygen and fuel must be captured and brought to feed the muscle fires, and waste products must be cleared away and excreted. Only by balancing catabolic processes with adequate anabolic ones can the activity continue. *Endurance is distance from bankruptcy.*

Let us examine briefly the various provisions which serve to stave off this fatal moment.

A muscle without oxygen supply will at best contract a few hundred times before succumbing to fatigue. With oxygen but no outside food supply this record may be multiplied several times. If supplied with blood bringing oxygen and fuel, the endurance of a muscle is almost unlimited. Heron, Hales, and Ingle of Minnesota (1934) found that the muscles in the hind leg of a rat could be stimulated through the nerve three times a second continuously for seventeen days and still the muscle continued faithfully to lift a 100 gm. weight with each contraction. The end came not because the muscle was fatigued but because the preparation deteriorated or the rat starved under the unnatural conditions of the experiment.

With but a single breath a good sprinter can run about 100 yards at top speed. With the oxygen of a few extra breaths he can continue the same speed for 220 yards. Beyond this his speed drops quickly through the middle distances. Here his performance is limited largely by the amount of oxygen he can supply to his muscles. In the longer distances, where muscles move more slowly, the oxygen intake is sufficient and one notices that the 25-mile run is made with an average speed only 15 per cent less than that of the 3-mile run. The 100 yards is run entirely on the muscle's reserve energy. The other sprints and middle distances are a fight for oxygen. The long distances tax the carbohydrate fuel supplies of the entire body. After such runs the blood sugar may be reduced to half its normal level and recovery is favored by eating (Matthies, 1931 and Edwards *et al.*, 1934). The same happens when a person works hard all day without eating. Approximately one pound of sugar is stored in the liver. When this is gone the body finds it more difficult to continue on an almost pure fat diet. It is often said that fats must be burned in a carbohydrate flame. This explains also the virtues of sugar in an athlete's diet.

Let us return to a more orderly analysis of endurance. Man can live weeks without food, about eleven days without drink, but hardly a dozen minutes without oxygen. A ready and liberal supply of oxygen to all organs is essential to their sustained activity. Consciousness endures but a second or two after the brain is deprived of oxygen. The first step in securing this oxygen is, of course, its capture by the lungs in ordinary breathing. But breathing ability is no measure of endurance. In fact, athletes with high endurance breathe in less air than others. The crux of the matter is to get the oxygen from the lungs to the oxygen-craving muscles and nerve cells. This requires a powerful heart and an efficient system of arteries, capillaries, and veins. Infinitely more important

(Continued on Page 286)

LIGHTS •

• SHADOWS •

Appropriate lighting, costuming, and composition—from the standpoint of photographic quality as well—have been an important part of the experimental activities of Ohio University Dance Club at Athens, Ohio; but this has been a role secondary to that of move-

RHYTHM •

ment in modern dance. In each of the accompanying photographs, an attempt was made to illustrate primarily the movement and groupings used in a particular dance composition; special lighting was added to enhance the pictorial effect gained by the use of fundamental compositional elements.

Ruth Alexander, Ohio University

Physical Education and the Parent

By

MRS. WILLIAM KLETZER

President, Oregon Congress of Parents and Teachers

BEFORE speaking to you about "Physical Education and the Parent," it might be wise to define our term.* In using the term "physical education," I would like to include the concepts of that subject which stand for education for better physical living. Such a subject should have a definite place in the modern school curriculum, and it is already finding an integral place in community life. Now when we define what we mean by "parent," I am particularly anxious to have a clear understanding, for of course there are parents and parents. Let us include under this term those parents who are concerning themselves with modern trends in education, attempting to keep abreast of changing social conditions, and who, when they do understand present needs, are willing to assist in doing something about them. As a representative of an organization of parents, may I use for this occasion the point of view adopted by the leaders in the National Congress of Parents and Teachers.

THIS group of parents, a few years ago, became interested in a report from the National Education Association embodying the newer concepts and objectives of education. These principles were summarized under "The Seven Objectives of Education." Education is no longer limited to the teaching of a few technical skills, commonly known as the "three Rs," but is responsible for preparing children to live a full, well-rounded, effective adult life. To accomplish this all-round training, which considers personality, adjustment, well-being, vocational efficiency, as well as skill in spelling and writing, seven objectives were outlined. They are listed as follows:

1. Health and Safety.
2. Worthy Home Membership.
3. Mastery of the Tools, Techniques, and Spirit of Learning.
4. Citizenship.
5. Vocational and Economic Effectiveness.
6. Wise Use of Leisure.
7. Ethical Character.

We accepted these objectives, and from that time evaluated the subjects in the curricula with these as a measuring rod. When new-fangled subjects were introduced, we were not stampeded by the tax conservationist who called them "frosting on the cake," but rather studied them to see in what way they answered the requirements of education as exemplified in the seven objectives.

We have been evaluating physical education by this measuring rod too, and in doing so have discovered that there are two kinds of physical education programs, one which answers but slightly this challenge of education for living, and another, the modern, well-rounded physical education program, which makes a contribution to each of the seven points. The old concept of physical education was merely gymnasium drill, culminating, perhaps, in mass exhibition. Parents as a class have little respect for this program and where it prevails you find a persistent effort on the part of the individual to be excused from participation. We might call it the "spinach" of physical education—it may be good for us, but it isn't very intriguing and it isn't quite the thing for the steady diet. This reaction was evident in the group of parents who recently gave a study to the physical education program of one of our Oregon cities when legislation had been proposed by the school board to restrict our compulsory law to the first two years of high school. These parents, after careful study, arrived at the conclusion that unless a physical education program was broad and included service for determining the physical capacities of the students, it should not be compulsory for any grade. On the other hand, they recommended that no change be made in our present law, but rather that the school district in question try out a demonstration in one high school to determine what changes in their present system could be readily carried out.

It is interesting to note that this committee of parents brought in a report similar to that made by the High School Principals Association of this state when it made an expression of its opinion.

LET US examine the seven objectives of education in relation to a physical education program. The first objective was health and safety. To be sure that sound health is the outcome of the physical education work, there should be some correlation with the school health department so that the physical capability of each student can be determined before the pupils are subjected to any type of work. Just as the saying "one man's meat is another man's poison" is often true, so one man's corrective exercise can be another's physical downfall.

At the present time, parents get around this matter by immediately asking that their child be excused from gymnasium if they feel that he is at all under par or off from the normal. Physicians readily give these excuses, though I have often heard them say they would much prefer to prescribe corrective exercise. Such corrective classes

* Address given at the Northwest District Physical Education Association Convention.

means grouping the students in smaller units and this, of course, means more personnel, better-trained instructors, and greater costs. The education of the community to accept such increased costs is one of the tasks that parents and physical education associations should undertake as part of a state and national program.

The correlation of the health department should go further than the mere determining of physical fitness; it should integrate the instructions in personal and social hygiene.

Safety is augmented by physical education when the training received produces muscular development, correlation of thought and action, and neuro-muscular control. The individual so trained is better fit to meet emergencies and to protect himself. This same command of the physical responses is an aid in securing vocational effectiveness.

IF GROUP play and games can be used to secure this muscular development and neuro-muscular control, then this form should be used to a great extent, for when a task involves joy and laughter it is much more beneficial than if we carry on in the "even if it kills us" spirit. But there is even a greater reason for using the play method. Three of the seven objectives deal with personality and adjustment: Worthy Home Membership, Citizenship, and Ethical Character. We have found to our sorrow that we cannot develop character by merely *talking* about it. This, more than any other skill or characteristic, can be developed only through *doing*. If we wish to develop leadership, we must give the pupil the chance to lead; if we would develop courage, then we must create the situation where courage can be exercised; if we want sportsmanship there must be an opportunity to be sporting, an opportunity to win graciously and lose manfully. We do not wish to place a child in real danger to have him exercise courage. Then the game is the best substitute under which these traits can be challenged. Dr. Morris Fishbein, editor of *Hygeia*, in an editorial appearing in that magazine, justified collegiate football on this ground even in the face of serious accidents which had occurred. There are few laboratory conditions which can be set up for the development of certain of these character traits, and none is so logical nor so safe as well-directed games, be they competitive or merely a part of the gymnasium schedule.

Music ensembles and group games are the two most effective places to teach that precious lesson, that the success of the whole depends on each carrying out his assigned task with due regard for the other players. The orchestra player can make a sorry mess of the whole if he forgets that he is one with his associates and tries to excel either in volume or in speed. Similar lessons are to be learned through games. These are the lessons which will produce citizens fitted to cope with the problems of the new social order.

And where, will you say, can we tie up physical education and Mastery of the Tools, Techniques, and Spirit of Learning? Again through the personal adjustment of the individual. A child who is having a struggle with subject matter has a bit more confidence in himself if he can excel in some activity. If the physical education program has a place in it where he can gain that bit of self-confidence, there is a greater chance that he can make progress in his school work than if failure is the only experience he has had.

The sixth of the seven objectives, Wise Use of Leisure, needs no exposition. We all see most readily the possibilities here. May I suggest that the greatest service can be given here by physical education when "carry-over" sports are included in the curriculum.

THE parent-teacher associations are most concerned with the community opportunities for leisure activities. We see a place here for the physical education program to extend beyond the school—encompassing adult education; recreation for the youth who has completed school, especially that boy and girl who have been unable to get employment; play places for summer and winter; and some form of municipal recreation program for the adult. There is no group that has taken a more active part in securing recognition by municipalities and communities of the need for playgrounds with trained supervisors. We thoroughly appreciate the necessity for training in this field and we have experimented to our satisfaction in the value of such a program as a preventive for juvenile delinquency.

A few years ago the character-building agencies of the Portland Community Chest put on a demonstration in one of our suburban communities. The community was chosen because of its solidarity and public spirit to support such a demonstration, rather than because it was a section of high delinquency. The boys of the community were high spirited, had gotten into a certain amount of difficulty, and had formed some questionable "lamp-post" gangs. They had gathered around the library and disturbed with their cat-calls and were as much of a nuisance as idle, boisterous youngsters could be.

Through the courtesy of the school board the gymnasium and playroom of the school house were made available. The men's athletic club loaned mats, medicine balls, volleyballs, etc. The business men of the community raised the money to pay a trained director and the demonstration stage was set. For a week or two before opening night the director, who, by the way, had played on the University of Illinois football team with Red Grange, spent his time getting acquainted with the gangs and inviting them to attend the gym program. On opening night two hundred boys showed up. The director segregated the boys into two groups by age. The younger boys came from seven to eight o'clock and the older boys from eight to nine o'clock. The boys were then grouped into squads according to the activities desired. High school athletes were pressed into service to lead some of the squads; other leaders were found from among the boys. There was something for everyone, and everyone seemed happy, and I think I can prove it to you when I say that one director and the janitor were the only adults to keep order and that no kind of disorder occurred dur-

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Trends in Physical Education

As Viewed by a Traveling Naturalist

By

WILLIAM GOULD VINAL

Professor of Nature Education,
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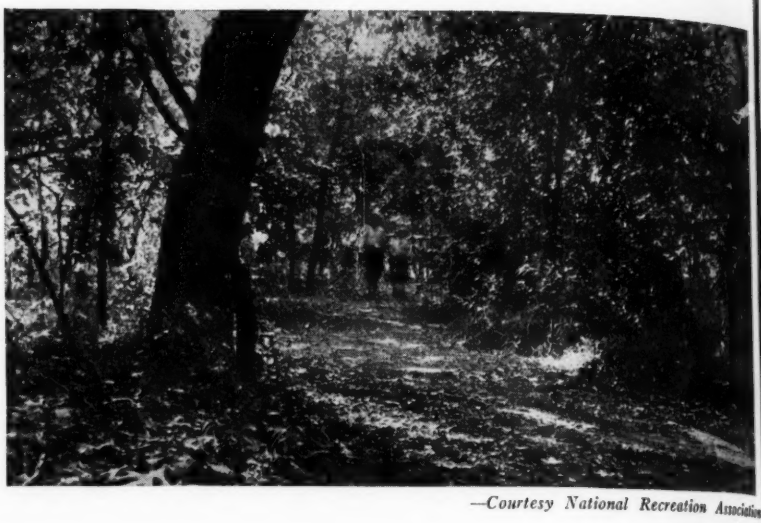
National Recreation Association



—Courtesy National Recreation Association

THE natural law of change is influencing physical education. The present school year finds me on "Sabbatical," giving courses in Nature Recreation for the National Recreation Association. Everywhere I find leaders who came through the physical education departments of colleges struggling with education in the large. They are suddenly confronted with organizing W.P.A. workers, county recreation leaders, Y.P.A., safety education, municipal camps, parkways, zoos, hiking trails, youth hostels, and a hundred and one new movements. The way they are handling the situation varies from producing a well-organized machine to floundering with ex-criminals and two per cent clubs, with the halt and the blind adding to the confusion. If present undertakings are omens of the future there will have to be some radical changes of the programs in physical education.

Physical education must have a wider base. It is a far cry from training leaders to give a setting-up drill or to be gridiron coaches in the gay nineties, than to be training socially-minded guides. Knowledge of the bones of the body is no longer power. Along with the goal of physique there are the all-important topics of health, safety, home membership, and citizenship. We cannot dismiss character training, which is a product of the athletic schedule, but in addition we must consider leisure habits. Do your graduates know what to do with underprivileged children of the slums? Can they run a program for the working boy and girl? Are they Scout, Y.M.C.A., and 4-H conscious? What is their attitude relative to youth hostels, social settlements, and the mentally handicapped? What ideas do they have about camps for cripples, diabetics, and the blind? Will they be free from political domination or interference? Will they have a devotion to service? There are still too many "smug" physical education leaders who sit on the coach's bench deaf to such purposes as expressed by the National Recreation Association "that every child in America shall have a chance to play. That everybody in America, young or old, shall have an opportunity to find the best and most satisfying use of leisure time." The physical education graduate of 1936 must be a "crusader" in the broadest sense.

A well-balanced physical education program must provide for trends. Both biologists and physical educators in the past have been guilty of being traditional. Each has been formal instead of informal. Each has had his mind fixed on drill. Each has presented a circumscribed

—Courtesy National Recreation Association

program with too little to do with electives such as music, art, and health. Each has tended to treat his subject as one for masculine monopoly. Each has been dealing with groups instead of individuals. A balanced program will give a student proficiency in some things that will be not only interesting, but practical in later life, such as gardening. It must recognize that big-muscle activities, such as hiking, are important after-school hobbies. Winter sports, whether skiing or tracking animals, are hygienic, recreational, and educational. Social activities

—Courtesy National Recreation Association

such as camping, and mental activities such as nature games are not only legitimate but a desirable part of a well-rounded program. Service activities such as scout leadership, and study activities such as the effect of foods on animals are necessary to equip the modern leader. Checking one's program against such items may lead to radical changes in some courses of study.

The modern curriculum will be characterized by individual needs instead of mass production. There is an old biological belief that nature will sacrifice the individual to save the race. Thomas Edison's teacher sent home a note that Thomas was a dunce and she couldn't do anything with him. *She* couldn't. She was running a one-man show. Thomas was an individual. He was a nonconformist. Physical education leaders know that they must run more than a one-ring show. Intermural activities are giving way to intramural. The student who does not play on a championship varsity football team can still be a star in minor sports, or in tap-dancing, or in raising tropical fish, or in camping. Such character aims as sportsmanship, responsibility, alertness, and social play may come from one or from different activities. The recent adopting of "coaches" as members of college faculties is a gesture that college leaders consider physical trends as educational trends—something demanding major consideration in the complete educational program.

Subject barriers will no longer be hurdles. Not long ago the entomologist would teach about bumble bees, but not about bumble bees on clover blossoms. The botanist would teach about trifoliate clover leaves and papilionaceous clover blossoms, but not about the nodules on the roots and nitrifying bacteria because those were matters for the chemistry teacher. No one could plant clover except the agricultural college. To have a living experience with clover or to tell about it as a story of interdependence was still for another pigeon hole. To feed clover to a pet woodchuck because it contained certain food essentials was a barnyard chore. A woodchuck in school would have received the same kind of a reception as Mary's lamb. Subject matter was cloistered.

In a locality outside of Detroit, called the Hartland Area, a broadminded philanthropist is raising Shropshire sheep. These are loaned to rural boys and girls. If they enjoy raising sheep they return half the progeny that more boys and girls may have sheep. It is important to note that these are pure bred sheep and that they are not given to the boys and girls. It is a plan to raise the mental level and also to increase the family budget on a self-respecting basis. Is this experience nature study or physical education? Is it education or recreation? Is it social science or biological science? It would seem that the important thing is that it is an enjoyable experience rather than a recitation. It is an experience that borrows from all subjects, as needed, and furthermore it stands the seven tests of education as put down by the National Education Association. In the final analysis it would seem that physical education and nature education have considerable in common. The best nature education is

the best physical education.

Physical education is getting out of doors. Both physical education and nature education are getting away from the dark gymnasium and laboratory. Study or play in the open air is certainly more beneficial than in a big closet. The ultra-violet rays of the sun are better than electric lights and there is comparatively little or no cost with the outdoor plan. Perhaps the Boy Scouts have led the way in sponsoring a primarily vigorous outdoor program. The scout manual is a textbook on hiking, camping, and nature study. Is the program one of nature education or physical education? Childhood outdoor play is an insurance for outdoor play in the later years of our adult life.

—*Courtesy National Recreation Association*

Metropolitan parks are outdoor school rooms. The gymnasium and most playgrounds cheat the child of the inherited right to contact nature. The *playground* is usually a fenced, hard-surfaced outdoor gymnasium without trees. The *intown park* is a small, scantily landscaped oasis and usually downtown in the industrial section. Jacob Riis in 1890 characterized it as a "breathing space, where one can do little else." It still holds true. It is just a place to sit and look. *Parkways* are usually landscaped driveways along river bottoms. Many parkways are being constructed by the W.P.A. Walkways, nature trails, and horseback ways are being provided for in these areas. *Metropolitan parks or reservations* are more ideally outdoor schoolrooms. They have varied topography, forests, trails, water courses for fishing, trailside museums, municipal camps, and outdoor cooking areas. They are accessible by automobile. It is in the parkways and reservations that we must look for future outdoor programs in physical and in nature education.

Once I had a group of student teachers in a metropolitan park. They had eaten goulosh from tin cups and wanted a drink. A group of them rinsed their cups in a nearby stream and proudly showed me how the metal sparkled. I asked if they knew that the stream drained streets and barnyards from the plateau? I also asked if a shiny cup meant that there were no germs? These students had had an excellent schoolroom course in health and bacteriology. What they acquired did not carry over to the out-of-doors. Along with the theory, apparently, there should go experiences in areas where germs are in action.

Physical education should function in neighborhoods with safety. Book learning is not all, and neither are neuro-muscular skills in a gymnasium—if the gymnasium is locked nights. Dodging and quick judgment are necessary in traffic, but the street is no place to practice such skills. Attitudes are also important. Whether one elects to go with the gang or with scouts, to cheap movies or to the library, to shoot craps or to play organized baseball, to go to a beer joint or to a community center is a neighborhood concern. A child needs security and opportunity to develop. Undirected street idling is often the result of no other choice. When the student leaves the physical education class he is "on his own." This is true on the street, in a vacant lot, or in a cave. Gang life, crime, and delinquency clearly show that. It is more important that physical education function with safety in the neighborhood than in the gymnasium. One evidence of this responsibility is the "playday" at a central meeting place. Instead of being an inter-playground contest in one event, the players are re-shuffled so that there are delegates from several playgrounds in twelve events. There is no such thing as a winning playground or champions. Everyone wins an enjoyable outdoor neighborhood social, in safety.

The American home has changed. Chores have dis-

(*Continued on Page 289*)

—*Courtesy National Recreation Association*

The Motion Picture Committee

National Section on Women's Athletics

By

GLADYS E. PALMER

Chairman;
Department of Physical Education for Women
The Ohio State University

THE INFLUENCE of films designed specifically for use in the classroom has been made the subject of many recent studies. The results of these studies demonstrate that the proper use of visual materials increases initial learning; effects an economy of time in learning; increases permanence of learning; aids in teaching backward children; and motivates learning by increasing interest, attention, self-activity, voluntary reading and classroom participation. There is, therefore, proof of the value of motion pictures in education. Since motion pictures are educationally valuable, teachers will wish to use them in their work as an improvement over and supplement to other visual aids. However, the fact that the value of the motion picture has been established does not assure us that films are available for use in the various subject-matter areas, that the films which do exist are of high quality, that teachers have at their disposal the mechanical equipment necessary to make use of films or that teachers will be trained in methods of using this new tool.

The most significant plan to meet these needs is offered by the American Council on Education headed by Dr. George F. Zook. This council proposes to establish an American Film Institute, the function of which would be to encourage the use of the full value of the motion picture in education. This plan took definite form late in 1934 when a group of educators, meeting in Washington, D.C., proposed the following objectives for the Institute:

1. To develop a national appreciation of the potential contribution of the motion picture to the cultural life of America.
2. To collect and distribute significant information concerning motion pictures in education at home and abroad.
3. To stimulate the production and use of motion pictures for educational purposes.
4. To promote the cooperation of all agencies interested in the production and use of motion pictures in education.
5. To initiate and promote research pertaining to motion pictures and allied visual and auditory aids in education.

The American Council on Education represents 23 national education associations and 18 other groups. It has 20 associate members from departmental organizations and over 200 institutional members from among the universities. There can be little doubt about the sagacity of their plan for centralization of organization. It is the most expedient and most reliable way to proceed to the scientific use of educational motion pictures.

In 1935 the Council undertook five specific studies and assigned their supervision to Dr. Edgar Dale of The Ohio State University. These projects, now nearing completion, are:

1. The establishment and operation of one committee in a selected field of subject matter.
2. A study of a number of practical methods of setting up and administering visual-education programs.
3. The preparation of a comprehensive bibliography of books and articles on motion pictures in education.
4. Preparation of a complete catalog of educational films in the United States.
5. A study to discover the educational requirements for motion picture projectors and other equipment.

Because the Motion Picture Committee of the National Section on Women's Athletics of the American Physical Education Association had already made a partial survey of this field of physical education, it was selected to carry on the study involved in Propect I. Under the supervision of Dr. Dale, the committee surveyed 385 colleges and universities to ascertain: (*a*) The interest in using films for physical education; (*b*) the extent to which these institutions are equipped to show films; (*c*) the type of film that seems most valuable as an instructional aid in the teaching of girls' games and sports; (*d*) the specific activities for which films are in the greatest demand.

The conclusions of this study may be summarized briefly as follows:

1. Because the motion picture facilitates the analysis of motion as no other medium can, it has an important function in the field of physical education.
2. Colleges and universities, generally, are equipped to show motion pictures, the use of the 16-mm. silent projector predominating.
3. There is an universal interest, on the college level, in motion pictures specifically designed as instructional aids in the teaching of women's sports.
4. The type of picture most desired is one which combines the analysis of correct and incorrect sport technique with the portrayal of a well played game, showing champions in action.
5. Taking into consideration the present equipment and facilities of college and university departments of physical education, instructional films would be of the most general value in the following activities: tennis, basketball, field hockey, archery, swimming, diving, golf, and volleyball.
6. There is every indication of a substantial demand for the rental and purchase of films produced as teaching aids in the field of women's sports.

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VOL. VII APRIL, 1936 Number 4

Terminology in Physical Education

WE HAVE noted with considerable pleasure the wide acceptance of "Definitions of Terms in Health Education," the report of our Committee on Health Education. This attempt to standardize and clarify the more common terms used in health education has been accepted not only in our own field, but in that of public health as well. The American Public Health Association and the National Tuberculosis Association have given publicity to this report. Authors have followed the Committee's recommendations in the content of new publications, and in some cases requests have come for permission to use the Terminology Report in connection with city and state courses of study. The National Office takes pride in commending the work of the members of the Committee who were responsible for this valuable report—Dr. Jesse F. Williams, Chairman, Dr. Arnold Armstrong, Miss Lillian Hudson, Miss Louise Strachan, Mr. Alden Thompson, and Miss Anne Whitney.

The literature of physical education would benefit by a similar revision of terminology. The name "physical education" itself is not particularly appropriate for the continually growing content of our modern and comprehensive program. The evolution of terminology is an interesting study in itself—gymnastics, physical culture, physical training, physical education, health education, and now the suggestion of sports education. While the more modern of these terms may be adequate to describe the subject matter with which they deal, they fall decidedly short when they attempt to encompass the administrative activities of a large department in our field. This accounts for the compromising practice of combining titles, for example, Health and Physical Education, or, as is now commonly the case, Physical Education, Health, and Recreation. The term Athletics has more or less been merged with the title of Physical Education.

Terminology will continue to change and to grow as new cultural patterns emerge to affect the daily life of our people and to shape the course of physical education programs, but even so, there is a need for more stability in our usage of terms than now exists. The Committee on Health Terminology has rendered our profession a significant service, and by so doing has demonstrated the value that could accrue from further studies along similar lines. In so far as the name "physical education" is concerned, it seems more and more to be confusing the issue between a field of subject matter and a field of administration. Probably most of the difficulty in agreeing on objectives, programs, and any other issues, comes from the shortcomings of any present title when applied to all-inclusive administrative functions. A representative committee, doing its work as capably as that of the one on Health Terminology, could not fail to clear up much of the confusion in physical education discussion.

Uniform Practice In Artificial Respiration

THE article by Goddard DuBois, "The Nielson Method of Artificial Respiration," which appeared in the January, 1936, issue of the JOURNAL, has attracted considerable attention and has stimulated numerous individuals to communicate with the Editor concerning it. Because of these inquiries and some evident confusion regarding the reasons for its publication, a word of explanation seems timely.

One of the important functions of the JOURNAL is to present new methods, original ideas, and unique projects in health and physical education. An acquaintance with current developments in our field is generally agreed to be a requisite for the progressive physical educator. For this reason the article on the Nielsen method was published. The wide use of this resuscitative procedure in Denmark, and its official acceptance by the Danish Red Cross Society make its introduction to physical educators the world over an inevitable thing, whether or not they may agree upon its comparative efficacy.

At the same time, it should be clearly understood that the publication of this article does not imply that the new Nielsen technique of resuscitation should supplant the familiar Schafer prone-pressure method, so widely accepted in America. In fact, the JOURNAL takes this opportunity to point out that the American Red Cross in its magazine, *The Red Cross Courier,* has recently published statements commending the Schafer method as superior to any other method of artificial respiration. Furthermore, from the practical standpoint, these statements emphasize the fact that the Schafer method is officially adopted by the American Red Cross, Boy Scouts, Girl Scouts, and the rescue crews of city police and fire departments, and that an estimated number of over thirteen million persons have been instructed in its procedures.

The American Physical Education Association reiterates a firm advocacy of the Schafer prone-pressure method of lifesaving. From the theoretical point of view, the readers of its JOURNAL should know about new methods of instruction in first aid and lifesaving, especially when they are being given extensive trial throughout an entire country, as in Denmark. Such new developments should also be given thorough scientific experimentation in our

own country. But, until our own American organizations of high standing officially adopt new methods, there should be no indecision or faltering in applying their present recommended procedure for resuscitation.

Sources of Physical Education Material

THE ability to memorize facts is undoubtedly less important than the knowledge of sources from which one can secure desired information. The truly educated person is not a walking encyclopedia; but he does know where he may find ready reference to those things which are not stored conveniently in his memory.

Areas of education, other than physical education, have stressed the importance of the use of reference material and have instituted survey courses of the literature in their particular interests. It is no less important that teachers of physical education should have a "mastery of sources where all types of materials may be readily located"; in fact, it seems all the more important because of the great diversity and scope of their present-day program—safety, play, recreation, interscholastic and intramural athletics, correctives, hygiene, etc. Despite this significance, however, the average teacher is undeniably lacking in his equipment in this respect. Miss Alice A. Sefton's paper, "A Guide to the Literature of Physical Education, Including Certain Aspects of Health Education and Recreation," (*Research Quarterly*, December, 1935) makes even the "old timer" in physical education feel a little abashed at his dearth of knowledge. This excellent compilation shows clearly the need for survey courses of the literature in physical education.

As a further check on individual or class knowledge of organizations, publications, foundations, services, etc., in physical education and allied fields, a follow-up article on Miss Sefton's "Guide" will appear in the May *Quarterly*. This will be in the nature of a "quizzer," and will ask pertinent questions on what services are rendered by our professional organizations, where to go for pamphlet material (free and otherwise), what films and slides are available, what bibliographies and directories have been compiled, and so on with many similar questions of practical nature. It can readily be seen what immense values the graduating student and young teacher, confronted with strange problems, would find in a mastery of source material such as this "quizzer" has to offer.

Signs of Spring!

AFTER such a winter as most have been experiencing, every little sign of a warmer season approaching is gratefully welcomed. With the melting ice, the first robin, and spring styles in the windows, our thoughts turn with pleasure to outdoor living. Mountain trails and riverways call us, and we start to lay our plans for camping trips, or jaunts along the trail of the Youth Hostels of which Miss Lee writes so charmingly in this issue.

For out-of-door living of this kind, however, some preparation and training are needed. Dr. Vinal, in another article in this issue, writes challengingly of the needs in physical education from this standpoint. Both these articles have special interest in view of the fact that physical education instructors are more and more being called upon for leadership in camping activities.

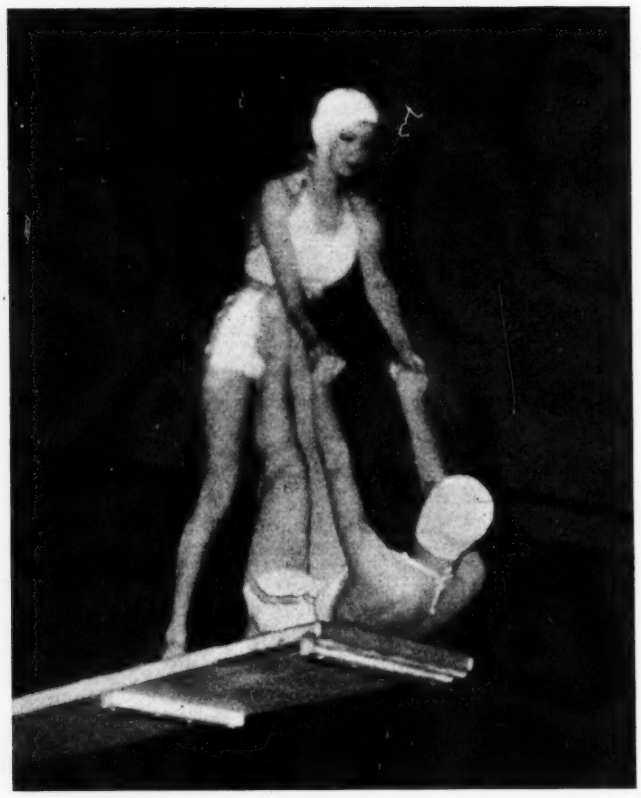
The Next Great Issue

NOT since the flames receded from the conflagration that was the question of formal vs. natural have we had an issue which has challenged every member of our professional group. In all parts of the land we were talking it over. The heat of the argument over this stimulating and exciting question sharpened us intellectually. We had to defend or proclaim—to "put up our dukes" or be run off the intellectual playground. An issue such as that, as engrossing as that, was a healthy and invigorating thing.

Fifteen years have gone by since that issue burned white. It has come to be as the World War—oldsters have forgotten the bite of it and the youngsters are unaware of its existence. Our times today seem unruffled by any such turbulence; our interests are many and diffuse, scattered over a thousand problems. Will any one of them grow large enough and important enough to enlist the interest and energies of the professional personnel in such a way as to pull us all together in general debate? Can anything shake us out of our complacency and start us searching, digging, exploring, proclaiming, even crusading for the cause we believe to be right?

F. R. Rogers gave us a potential torch seven years ago when he tried valiantly and courageously to get us to give the game back to the boys. Carl Schrader and Ernst Hermann rose up in wrath three years ago to protest against the steady movement towards multiple-subject teachers. McCloy, Cozens, and Bovard have insisted upon objective testing; and the Southern Conference has endorsed scholarships for athletes. Dana Bible has talked of the educational value of football and Laura Cairns has argued that physical education teachers do not make good teachers of hygiene. All these and more have been before us, but none seem challenging enough to arouse us to choose sides in a good stirring intellectual war.

Where will such an issue be found? Among the above? Or are we too complacent—perhaps too afraid—to go out into those wind-swept plains of controversy and feel the keen fresh air of differences of opinion? We have had stirring debates in other fields: Russell vs. Hutchins on the right to an education; Briggs or Watson vs. Bode on indoctrination. Our field needs such an issue. Let someone propose to abolish all numerical or letter grading schemes; let someone argue that football as such has no character-building value; let us try Rogers' plan of player control. Did you ever try to contest the point with Rogers himself? Let us bring some thought, not merely tradition, to bear upon the problem of amateurism, or of eligibility. There must be some issue, some question of the day, containing enough irritation in it to make us heat up a bit; enough feeling in it to make us stir intellectually. We need it, and we wonder how soon it will come and what it will be.—By *D. Oberteuffer, Ph.D., The Ohio State University.*



The shoulder stand dive.

Water Sports News

By

ANN AVERY SMITH

Chairman, Sub-committee on Water Sports
Women's Athletic Section
American Physical Education Association

The Water Sports Guide

THE field of water sports is an extensive one covering a wide range of related activities, such as the following:

Pool and beach sanitation
Swimming
Water stunts
Water games
Water formations
Figure swimming
Diving
Stunt diving
Life saving
Water front safety
Water pageants
Life-saving exhibitions
Remedial swimming
Marathon swimming
Recreational swimming
Water sports week programs
Judging form swimming and diving
Rating officials
Canoeing
Boating
Rowing
Regattas
Swimming meets
a) intramural
b) interclass
c) interscholastic
d) intercollegiate
e) informal recreational

The annual *Water Sports Guide for Women and Girls*, published by the American Sports Publishing Company, New York, attempts to give current information concerning these activities and to assist in their promotion in the high schools, preparatory schools, athletic clubs, recreational centers, settlement houses, Y.W.C.A.s, colleges, and universities throughout the country.

Swimming Meets

The Intercollegiate Telegraphic Meet. The telegraphic meet has been used for some time among the colleges and universities of the Middle West. The first meet of this type on record was sponsored by the Terrapin Club of the University of Illinois in 1927. Five universities in the Middle West competed: Northwestern University, the University of Illinois, the University of Iowa, the University of Missouri, and the University of Wisconsin. In 1930 and 1931 meets of similar nature were again sponsored by the University of Illinois.

In 1932 and 1933 the Dolphin Club of the University of Wisconsin conducted the meets and invited all the colleges and universities of the Middle West to participate. Twenty-eight colleges competed in 1932, and nineteen in 1933. The University of Pittsburgh sponsored an eastern intercollegiate meet in 1933, and the results of the two meets were combined.

In 1934, the University of Illinois sponsored the first national meet, with the University of Pittsburgh sponsoring the eastern regional meet, the University of Texas a southern meet, the University of Illinois a central meet, and the University of California at Los Angeles a western meet. The results of the four regional meets were combined to give national results and records. The total number of competing colleges and universities was forty-seven. Of this number, nine entered the eastern meet, seven the southern meet, twenty-one the central meet, and eight the western meet.

In 1935 the second national meet was sponsored again by the University of Illinois. Penn Hall, Chambersburg, Pennsylvania, conducted the eastern meet; Florida State

College for Women, Tallahassee, the southern meet; the University of Illinois, the national and central meets; and the University of California at Los Angeles, the western meet. The total number of colleges and universities entering was 46. Of this number, 9 entered the eastern meet, 10 the southern, 16 the central, and 11 the western. The total number of women competing was 194.

The third national meet in 1936, held during the month of March, was sponsored by Wayne University, Detroit, the 1935 winners. Swarthmore College, Swarthmore, Pennsylvania, conducted the eastern meet; Oklahoma Agricultural and Mechanical College, Stillwater, the southern meet; the College of Puget Sound, Tacoma, Washington, the western meet; and Wayne University, the central meet. The events were as follows:

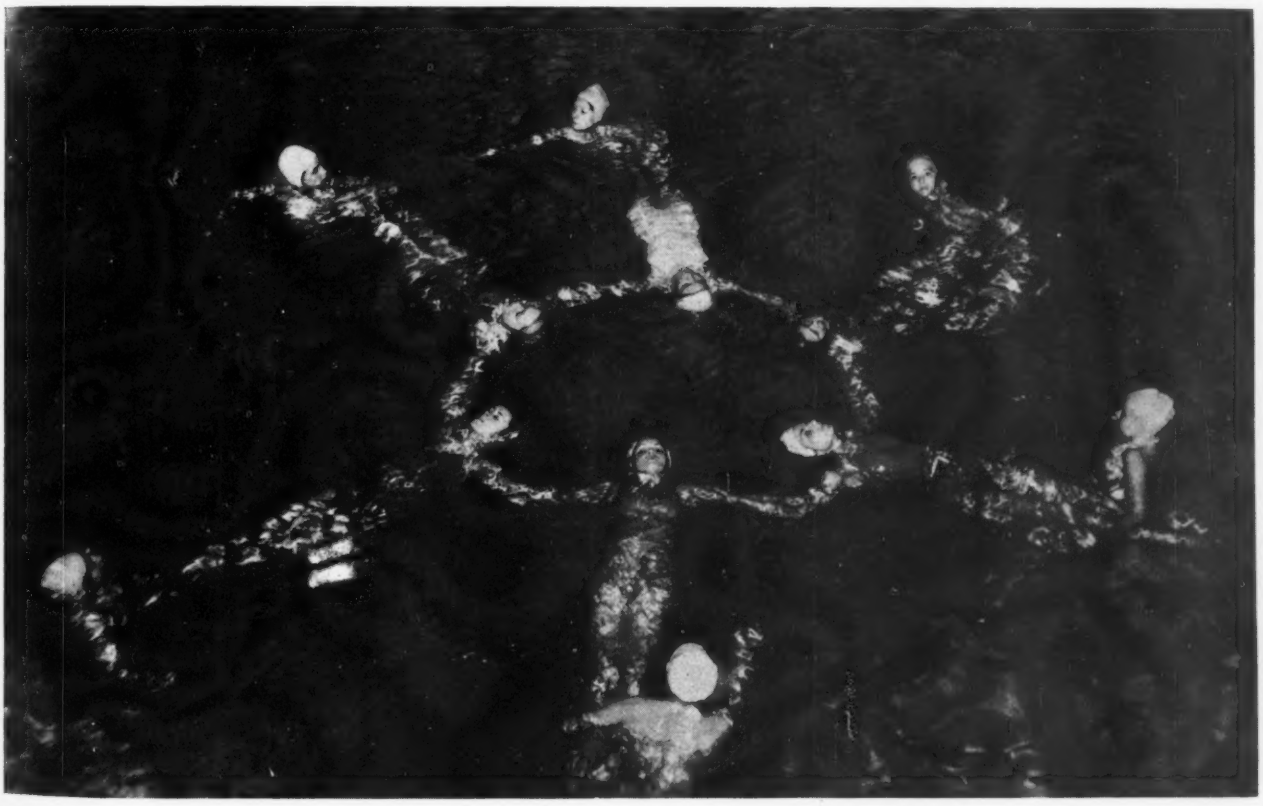
40-yard crawl	100-yard breast
40-yard back	60-yard medley relay
40-yard breast	80-yard free style relay
100-yard crawl	75-yard medley relay
100-yard back	100-yard free style relay

The telegraphic meet offers a wholesome type of competition. Participants swim against time, and increased swimming efficiency is the thing naturally emphasized throughout the season of competition. There is not the strain and stress inseparable from direct competition wherein entrants travel for long distances to compete. There are none of the disrupting effects on academic work caused by trips. Expenses involved are comparatively small. Of marked importance is the lack of pressure to compete during the menstrual period. The best results from two meets, held any time during the month of March, are used. In this way the local meets can be scheduled to conflict least with the menstrual dates of the team members.

The intercollegiate meet is designed particularly for the talented swimmer who enjoys swimming races. Swimming instructors should not allow coaching for intercollegiate competition to absorb her time to the neglect of the average swimmer. In well-planned water sports programs, the latter is given opportunity to participate in meets of a less formal and strenuous nature. Furthermore, talented swimmers are qualified to coach each other. At several colleges and universities the intercollegiate meet serves also as an interclass meet, and the captain and manager of each class team do an extensive amount of the coaching.

Membership on the telegraphic or varsity team is usually a mark of high swimming achievement among competing colleges and universities, and the local meets are events of moment, ranking among the important athletic activities of both men and women in the life of the college communities. Although the results of competitors from the different colleges can not be had at the time of the local meets, comparison of results can be made with the national and regional records of the previous year. Pennants of various colleges decorating the pools serve to add a touch of realism, and teammates and spectators alike become stimulated in visualizing the numerous unseen competitors all over the country.

Revolving wheel formation, feature of the annual Terrapin water carnival held at the University of Illinois.



Three items are of vital importance in conducting telegraphic meets: (*a*) the distance covered by each contestant in each event respectively must be exactly the same; (*b*) all watches must be synchronized by reliable jewelers to ascertain that all keep accurate time to the tenth of a second; and (*c*) three watches must clock each swimmer—the times of the three timers of each swimmer being recorded on the result sheets to insure that no mistakes are made in hurried calculations of the official times.

Further attempts have been made to guard against possible error in recording results by requiring a number of signatures on the result sheet: those of the timers for each placing contestant, that of the engineer who measures the tank, of the registrar or dean of women who checks on the academic standing of the contestants, and of the jeweler who synchronizes the watches.

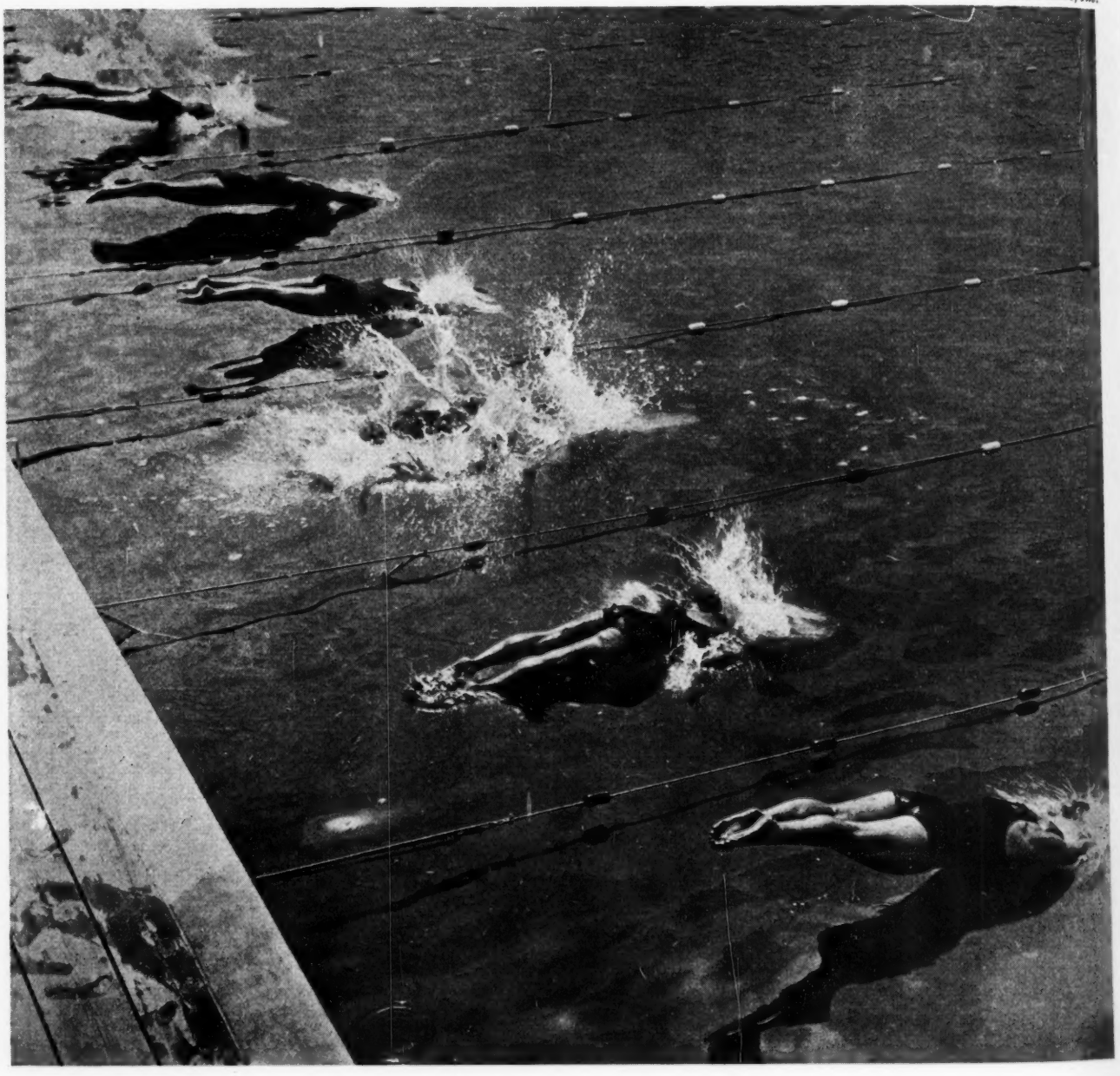
In the past the meets have involved a considerable amount of correspondence, especially on the part of the student managers and swimming instructors of the sponsoring colleges. Each year additions have been made to the rules and regulations in order to include as much detailed information as possible in the interest of lessening the burden of correspondence.

The Interscholastic Telegraphic Meet

The organization of state interscholastic telegraphic meets for high school girls has begun. Indiana is the pioneer state. Under the leadership of Miss Daisy Nejdl of Whiting High School, Whiting, Indiana, seven high schools competed in March, 1935. The meet took the place of direct interscholastic competition which has

Start of the 50-yard Decathlon event at Zach's Bay, August, 1935.

Wide World Photos, Inc.



been carried on for several years. The contestants thought at first that there would not be much interest in competing against time and competitors miles away. However, they found, when the day of the meet arrived that the joy and "thrill" of doing their best for their school was far from lacking.

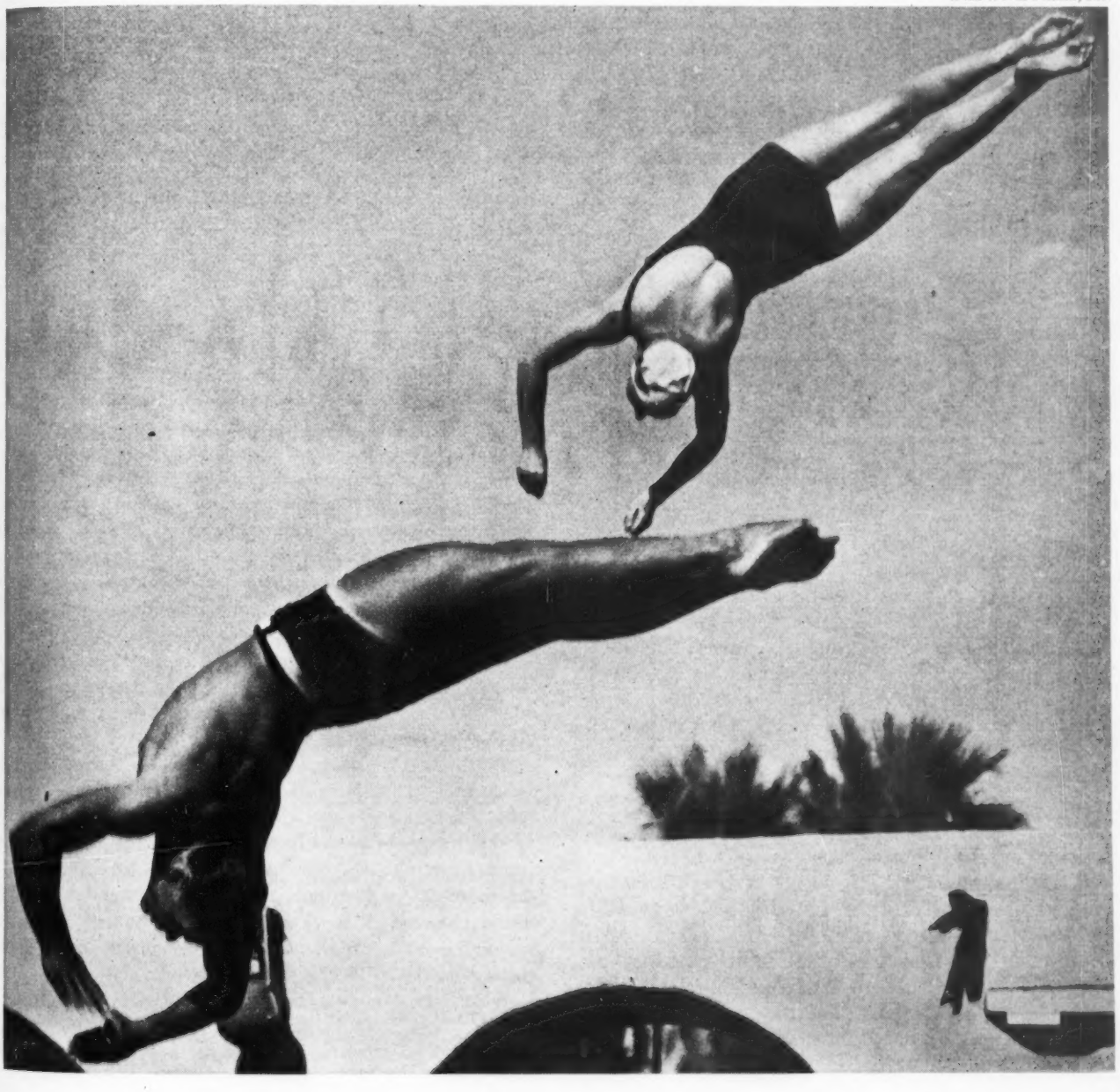
In March of this year, Miss Alice Bonar, Waukegan High School, Waukegan, Illinois, had an enthusiastic response to her efforts to organize a telegraphic meet among the high schools of Illinois. Miss Nejdl and Miss Bonar are among the state chairmen of water sports who have been appointed to foster the movement in the various states.

Intramural Meets

Intramural meets are held extensively in our schools and colleges. These provide opportunity for competition for the interested swimmer of average ability. This year the Women's Athletic Association of the University of Illinois has planned to conduct an Intramural Water Sports Week to furnish opportunity for competition to groups of independent and sorority women. The events are: modified water polo; 25-yard couple tandems; form swimming; fancy diving; single, double, and triple stunt diving; single and double water stunts; 25-yard speed events; and novelty, medley, and free-style relays. Included also is a marathon swim of three miles which will be conducted during the intramural swimming season covering a period of four weeks. A chart will be provided on which each girl may keep a record of the lengths she swims. Small insignia will be given to those who complete the three miles before the final day of the Water

(Continued on Page 272)

Bunny Fergus, former national champion, and Harold "Dutch" Smith, Olympic champion, perform a dual half-twist dive at Palm Springs.
Wide World Photos, Inc.



Teaching Beginners to Swim

A Physical, Physiological, and Psychological Method

By

DAVID A. ARMBRUSTER

Assistant Professor of Physical Education and
Swimming Coach, University of Iowa

WATER is an entirely different medium for man than is air or land. The laws that govern man's behavior in water differ essentially, in most respects, from those of air and land. The laws of gravity in air and specific gravity in water have exactly opposite manifestations. The laws of motion, of action, and of force are similar, but the laws of balance and support differ, especially in the horizontal position, in that the center of support shifts away from its center of gravity (toward the head). Therefore, when man enters water for the first time, he encounters many new situations, strange sensations, and an almost entirely different environment. His reactions and response to these situations disturb his behavior in many ways and he must readjust to this new environment.

Effects of Water on Physical Behavior

The moment man enters water and submerges up to his head, his body loses weight relative to his medium. He also partially loses control of the body in not being able to hold something more solid than water with his hands or to keep a firm footing on the bottom with his feet. This is a disturbing factor to his sense of equilibrium. Then, too, in moving about in water, either walking or swimming, he meets with considerably more resistance than on land. Should he attempt to swim, he must change his position from the erect to the horizontal, which is again different from his usual mode of locomotion. When the body is entirely submerged without the feet on a support, one naturally assumes that he will sink according to the law of gravity; but on the contrary, a pressure is met which tends to support him, giving a feeling of instability. He has a light, buoyant sensation as though the body weighed nothing at all. In many cases this factor alone is so disturbing to the sense of equilibrium that behavior verges on hysteria. Man's tendency is to reach, grasp, stretch, and clutch wildly for solid support. These responses are manifest even in very shallow water. He has not yet learned to rely upon or give himself over to the law of specific gravity, but rather gives way to the natural feeling, that of sinking, because he is without firm, physical support. It is naturally assumed that the law of gravity in the water will manifest itself in the same way as it does on land.

The human body does not always rise to the surface when submerged in water, but as a general rule it will (depending upon the relative amount of bone, muscle, and fat, and the air retained in the lungs) because the specific gravity of the whole body is usually less than that of water.

As a general conclusion, man's body is buoyant in water and will float when properly controlled. If this statement is true, then water as a medium does offer a semi-solid support for man, against which his arms, legs, and body can press or recline to maintain a controlled position of support. By a curious mode of thrusts, lashings, pressing, pulling, and pushing motions of the arms, hands, legs, and feet he can obtain propelling force as well as maintain a semi-horizontal position in the water. Water then is something the human arms and legs can get hold of, and may be classified, for the purpose of this study, as a semi-solid substance in relation to man's body in the act of swimming.

Physiological Effects of Water

Since man is a terrestrial habitant, his physiological adjustments have been made in accordance with such an environment. As soon as he enters water, many of his physiological responses are immediately disturbed.

Many investigations have been carried out relative to the effects of submersion in water on the physiological responses of man, but the greater part of these have to do with the therapeutic use of baths. In these investigations, the water temperature variation has been the chief interest of the investigator, and although some of this work applies to swimming, much of it does not.

Recently some work has been reported which deals directly with the question of physiological alterations due to submersion in water of swimming pool temperature. This work is reviewed briefly:

Tuttle and Corleaux[1] investigated the effect on the heart rate of submerging human subjects in the swimming pool. They concluded that water of the ordinary swimming pool temperature caused a decided decrease in the heart rate. It was also found that the extent of the decrease was proportional to the initial heart rate. The data suggested that those who continuously frequent swimming pools experience the same cardiac changes as those who do not. The cardiac disturbance due to submersion is not compensated for by continual exposure.

[1] W. W. Tuttle and J. F. Corleaux, "The Response of the Heart to Water of Swimming Pool Temperature," *Research Quarterly*, VI (March, 1935), 24-26.

Wells[2] carried out extensive experimentation on the effect of submersion on physiological functions. Briefly, this experiment proved that, at swimming pool temperature, there was a significant decrease in the heart rate, an increase in systolic blood pressure, deep forced breathing, altered body temperature, all accompanied by shivering. It is the consensus of opinion that the physiological disturbances experienced in water are due to interference of the heat regulatory mechanism.

Psychological Effects on Behavior

As a result of the physical and physiological disturbances and changes that take place while being subjected to this new environment, the individual exhibits various degrees of emotional instability. This new environment, whether it is colder or warmer than body temperature, will give rise to fear responses. These mental disturbances may take the form of fear, pain, nausea, distress, anguish, apprehension, or alarm[3]. If the entire body is submerged, the effect is intensified, because the stimuli to the eyes, nose, and mouth are different than those ordinarily experienced. The eyelids are closed tightly because of an irritating and smarting sensation. The lips are contracted and depressed together tightly, because of a dread that the water may enter the mouth and cause strangulation. When the ears are submerged, practically all sounds above the water level are eliminated and the strange underwater noises become more intense. At first this is very annoying and unpleasant and man tends to avoid this situation by raising the head rapidly out of the water. When the sensory organs are stimulated by submersion, the human responses and reactions are as follows: a cringing and withdrawing from the stimulus; a facial muscle response, such as eyes and mouth registering fright, distress, pain, and irritation. The entire skeletal musculature becomes rigid.

Man normally avoids unpleasant things, and, if he has experienced any of the above reactions, submerging his head in water is one of them. There are, however, many other conditions that give him cause to avoid and fear this experience. His position for locomotion is changed from vertical to horizontal. His center of support in relation to his center of gravity is changed while in the horizontal position in water. His body is very unstable, owing to its loss of weight accompanied by a buoyant feeling and the pressure of the water forcing it upward away from the bottom, his only hope of a firm support. He becomes confused trying to cope with the two contra-acting forces. Gravity tends to press him downward, and the pressure of the water tends to press him upward, with only a thin layer of water, the surface, separating these two forces.

Water also interferes with normal breathing, causing strangulation if it enters through the nasal passages, depriving one temporarily of that basic element, air. If the water enters the mouth it may be swallowed, thus causing nausea. The cooler temperature of the medium, water, produces a loss of body heat, causing a change in nervous muscular tonus.

Purely mental factors that govern man's behavior in relation to water as a medium may be due to the association of drowning with water. One of man's greatest fears on land is that of falling. In the water the same fear is present in that one associates sinking with that of falling. Even in shallow water one abhors the thought of sinking suddenly. When the balance is temporarily out of control, there is a feeling that support will never be regained again with the feet under the body, on the bottom. One may feel that he will be unable to rise from a submerged depth to the surface to obtain air again. Another mental illusion comes when he removes his feet from the bottom for the purpose of floating or paddling, for there is a strange, irresistible feeling that they will continue to rise on up out of the water. There is a sensation of sinking and one feels that he may never be able to right himself on the feet again.

Man is also cognizant of the fact that he cannot be deprived of air for more than a few minutes and continue to exist. Being aware of this fact and being suddenly deprived of air, by unexpectedly losing balance, or slipping or falling into the water, one may become momentarily hysterical and mentally unbalanced. There may then be a loss of reasoning power and ability to help himself sensibly. Man is therefore wary when submerging even voluntarily, lest he lose his support with either his hands or feet, or remain under too long. He is almost always out of the water long before his breath-holding limit has been reached. This sensation and feeling of not being able to control oneself physically and mentally in water by means of either tangible support or without it, is ever a source of mental anguish and causes no end of concern and foreboding.

Adjustments for the Beginner

These physical, physiological, and psychological disturbances of man in relation to water must then be altered and eliminated by a method of repetition, in varying situations, until he may be able to adjust and accustom himself to this new environment, so that those responses which have been unpleasant will become pleasant. First of all, mental responses must be changed through teaching by setting up associations carefully planned so as to remove the feeling of fear and instability. It has been the author's experience that the difficult thing is not the teaching of the skill of a stroke to a beginner, but the winning of him over and obtaining the relaxation of a "muscle-bound mind" to a frame of mind, or "set," that any one can swim as naturally as he can walk. It requires even longer for a child to learn to walk than for him to learn to swim.

First, the beginner is urged to give himself over to a basic, fundamental, and sound method of orientation in water, to adapt himself physically, physiologically, and mentally, preliminary to an orientation of the unskilled and skilled strokes. This is accomplished through a series of orientation exercises such as the author has prepared, for example: walking, jumping, dipping, submerging, opening eyes and mouth under water, "shipping" water

[2] George Wells, "The Effect of External Temperature Changes on Heart Rate, Blood Pressure, Physical Efficiency, Respiration and Body Temperature," *Research Quarterly*, III (December, 1932), 108-121.

[3] I. W. Scherer, "'Fear' Psychology in Swimming," THE JOURNAL OF HEALTH AND PHYSICAL EDUCATION, II (March, 1931), 24-5.

with the mouth, proper under- and out-of-water breathing, floating in various positions, balancing, relaxing, sommersaulting, handstanding, sliding, etc. In fact, the beginner is introduced to every conceivable position or angle in the water, so that he may adjust, conduct, and govern his new experiences and sensations in this new environment. Each exercise described is essential, basic, and fundamental in the procedure of this orientation method. Each orientation exercise should be repeated until every trace of timidity or distress in doing it has disappeared. This may be easily discerned from the expression of the face, or brow, or general tension of the body. Some of these orientation exercises may at first be very unpleasant, but through repetition they become pleasant and satisfying even to the most timid.[4] The fear responses disappear and the student gives himself over to the water more and more completely. On the face, where once fear responses persisted, an expression of confidence appears and finally is established.

The student is now thoroughly oriented and prepared for motivation in the unskilled strokes. By unskilled strokes is meant those strokes which propel the human body in water by mechanics similar to those used on land, namely, a pull-and-push mode of locomotion. This movement consists of alternately pushing with the legs and alternately pressing and pulling with the arms, with the exception of one distinguishing pull-and-push mode, which differs from the alternating type. This is the simultaneous pull-and-push method with both arms and legs, commonly known as an elementary breast-stroke movement. It may be correctly assumed that if we had a thousand men who could not swim a stroke, or never had been in water before, and we threw these men into deep water, the first motions used would be either an alternating or simultaneous pull-and-push motion of the arms and legs resulting in a motion comparable to walking.

The beginning student is oriented in the pull-and-push methods of locomotion, not only on the face but on the back and on both sides. In fact, the beginner should not be permitted a preference here for any one stroke. He should not be allowed a preference for either side. At this stage of development no one side or method should dominate, but the beginner should become proficient and oriented in all the body positions for several reasons. His orientation in all positions aids in accustoming him to water better than if a single body position is allowed to become dominant. It relieves distress and fear and will increase his safety in deep water, decreasing other further mental hazards and establishing greater self-assurance as varying situations may arise later while in deep water.

These unskilled strokes give the student a sense of supporting his body in water, a sense of its velvety-smooth feeling, its upward pressure against all sides of his arms and legs when lying either prone or supine, or on the side. Purchase is obtained by pressing, pulling, and pushing against this upward force of the water. Thus he feels and is able to control his balance in motivating himself in this unstable, fluid environment.

[4] E. L. Thorndyke, "Laws of Learning," II, *Educational Psychology.*

Advancement to Skilled Strokes

When the student has acquired a smooth rhythm in all of these unskilled methods of swimming and all struggling movements have disappeared, he is now thoroughly oriented and adjusted physically, mentally, and psychologically, and has acquired a "mental set" for learning more skilled and technical methods of swimming. It is at this level he has acquired a real desire to learn. From this stage on the learning of the skills will be very rapid because of the increased interest and the mental assurance that swimming can be mastered.

One of the most controversial problems in the field of swimming today is what skilled stroke or strokes should the instructor first teach a class, and in what further sequence they should be taught. This is the problem which has prompted the writer to make this study and to propose a method for beginners' instruction. The suggestions embodied in this paper are the culmination of years of study and experimentation. The primary objective is not to single out any one or two strokes for the beginner. All of the skilled strokes should be taught as a group. If the beginner is thoroughly oriented as outlined above, the time required to teach all strokes is not much longer than that required to teach just one or two. This course of instruction has proved that the average student can, in general, swim all strokes fairly well and need not confine himself to one or two strokes in order to become a proficient swimmer. However, after a student has learned all of the strokes, he will find one which is best suited to him, in that by its use he can swim the farthest distance without fatiguing too soon. It will be more or less his natural stroke. It therefore seems obvious that it is a mistake for an instructor to favor a "pet" stroke of his own prejudice in teaching beginners swimming. It is impossible for the instructor to recognize and understand all the varying physical, mental, and physiological characteristics of the individual members of his class at the start of the course. So far, it is not possible for him to know, until a student has learned all of the skilled strokes, which one is best suited to him. The student, not the instructor, finds his natural stroke through experiences in swimming various distances. The student adopts and prefers the stroke or strokes that give him the greatest pleasure, the most satisfaction, and the easiest mode for swimming. In distance swimming, not speed but distance covered is considered the criterion. The instructor, of course, must advise and consult with the student when it seems advantageous, and create situations for him that will guide his aptitude toward his most natural stroke or strokes. Learning all of the strokes during the stroke-learning period of the course prevents "grooving" or having students become "set," or establishing a "set," in any one stroke before others are learned.

Introduction of Distance Swimming

When the class has learned all of the skilled strokes

(*Continued on Page 274*)

Physical and Health Education Program

in the University of Chicago Laboratory Schools (Part 2)

By

LESLIE W. IRWIN

Chairman of the Department of Physical and Health Education,
University of Chicago Laboratory Schools

THE physical education program of activities in the University High School is an informal program composed largely of sports.* Team sports are stressed for their developmental value and dual sports for both their developmental and carry-over values. With few exceptions, the same activities are offered each year. It has been mentioned previously that certain seasonal activities were carried over from year to year in order that pupils might attain the desired proficiency. It was also mentioned that there was progression from year to year depending on the knowledge, skill, and ability of each pupil.

Physical educators have at times been criticized for offering the same activities year after year. To the casual observer it would seem that little progression could exist within such a program. To illustrate the necessity of this yearly repetition of activities let us take tennis as an example. It is first introduced to the children as a class activity in the fourth grade. The amount of time devoted to it is one class period a week during the spring season which makes a total of eleven or twelve periods. The introduction of tennis consists largely of teaching the children how to handle a racquet and practice serving against a wall. The majority of them do not know the rules of the games. By giving the same amount of time to it in grades five and six most pupils enter the subfreshman year in high school with a certain amount of skill and ability although they are far from finished performers. Perhaps it should be mentioned here that pupils, on completing the sixth grade in the elementary school, enter the high school as subfreshmen. The majority of the subfreshmen have developed enough skill in tennis so that they enjoy playing the game and most of them aspire to become better performers. It would be possible to eliminate tennis as a class activity at this point and offer another sport in its place. To do this would very likely be disastrous, to say the least, to the interest of many pupils in physical education activities. It seems better to offer a rich program of activities over a period of years and to vary the time element. To a certain extent then, progression is found within the activity rather than from one activity to another. It is possible to show this progression in a general way but as it depends on the skill and ability of the individual, in the final analysis it may vary as much as the number of individuals in a group. A certain amount of group instruction is usually desirable in all activities but the greatest progress is made when individual attention and assistance is given.

THE subfreshmen, freshmen, and sophomore boys and girls have a one-hour physical education class period daily and an after-school intramural program in which they may participate two or three times a week. The swimming pool is open for free swimming after school hours for those who are not participating in intramural activities or on days when their intramural teams are not scheduled to play.

The daily class period is used largely for the teaching and practice of fundamental skills and techniques with the focus of attention on the improvement of the individual. The after-school intramural programs are reserved largely for the playing of games. However, assistance is given to individuals in improving their playing ability in game situations.

With a few exceptions, the activities offered in the daily class period to the subfreshmen, freshmen, and sophomore boys and girls are the same, and many of them are carried over from elementary school. They are, however, much more highly organized and conducted at a higher level. These activities are swimming, soccer, speedball, tennis, badminton, social dancing, touch football, volleyball, apparatus, basketball, boxing, handball, ice skating, track, wrestling, rhythms, hockey, deck tennis, and playground baseball. Swimming is the only activity carried on throughout the school year. All other activities are arranged on a seasonal basis. Boxing, wrestling, and handball are not offered to the girls, and rhythms and hockey are not offered to the boys. The girls' activities in high school are also conducted according to girls' standards. A feature of the girls' activities is the extensive rhythms program conducted during the winter season. The same type of rhythmic activities as offered in the elementary school is carried on in high school only at a much more advanced level. The rhythms work is closely correlated with the music, art, English, and history departments of the high school. The rhyth-

* (E.N. In Part I of this article, published in the March JOURNAL, Mr. Irwin described the programs of the kindergarten and early elementary grades of the Chicago University Laboratory Schools.)

mic activities culminate each year in a joint music and rhythms program.

AN EXTENSIVE after-school intramural program is conducted for the subfreshman, freshman, and sophomore boys and girls. The two programs are similar enough in organization and purpose to be discussed together.

The sports conducted in the intramural program are selected from the daily class period activities. Competition is arranged on a team basis. A check is made at the beginning of each season to determine those who wish to be placed on a team for the season. The pupils indicating their desire to participate in intramural activities are then placed on teams by the physical education teachers and representatives from the various classes. Results of tests are used occasionally for classification of pupils, but experience has taught that more equal competition results if playing ability in the game situation is considered. The teachers and pupils are usually familiar enough with each pupil to make the divisions fairly. The number of teams formed is determined by the number of pupils indicating their intention of participating during the season and the size of the teams necessary for the seasonal sport. The teachers reserve the right, for a two- or three-week period after competition begins, to make any desirable shifts in personnel to equalize competition. However, shifting of pupils is rarely necessary unless the service of a team member is lost completely. This sometimes happens due to physical disability. After the members of each team are announced, they are permitted to select a name for their team. No rules or regulations are observed in this selection. The traditional procedure is to choose a new and unique name. The captains are usually reliable leaders and must be responsible for their teams. The teachers work through the captains in matters that have to do with team organization.

The schedules are made up in each sport at the beginning of the season in order that each pupil may know the exact dates his team is scheduled to play throughout the entire season. A four, five, or six "round-robin" schedule is usually arranged in each seasonal sport. Elimination tournaments are rarely used. Practically all competition is on a team basis. The schedules are posted on the bulletin board and each team captain is responsible for having his team members ready to play on the dates his games are scheduled. All games are played after school and each team is scheduled to play from two to four games a week. Officiating of games is done by the pupils. An official for a given day is selected from a team that is not scheduled to play on that day. Intramural awards are issued but very little stress is placed on them.

The girls' intramural organization promotes many social activities during the school year in addition to athletics. The Girls' Athletic Association, of which each girl is a member, conducts the social activities and assists in determining the policy of intramural athletics.

THE junior and senior high school boys and girls receive their work in the physical education department of the University. They have from three to five class periods weekly. The number of weekly class periods for each pupil depends on the individual's need as determined by physical condition, ability in a number of activities, and the academic schedule. The class period for both junior and senior boys is scheduled the last period in the school day so that their time for after-school activities is a continuation of the regular class period.

It is felt that by the time pupils become juniors and seniors in high school they should be permitted the freedom of selecting the sports in which they wish to participate. Both the junior and senior boys and girls have the privilege of electing their class and after-school physical work from a wide range of activities. This permits each pupil to specialize in those activities in which he is particularly interested.

The activities offered to the junior and senior boys are the same as those offered to boys in the three lower high school classes plus golf, fencing, tumbling, and squash racquets. The activities offered to the junior and senior girls are the same as for the subfreshman, freshman, and sophomore girls plus bowling, golf, and fencing. The after-school activities for the junior and senior boys not on interscholastic athletic team squads are usually a continuation of the elected class-period activity with competition arranged within the group whose members have elected a particular activity. The activities elected are usually dual sports so that the arranging for competition is not a serious problem. This group is relatively small as a majority of the junior and senior boys report for the interscholastic athletic squads.

Interscholastic athletics for boys in the University High School are conducted in soccer, basketball, tennis, swimming, golf, track, and baseball. Members of the interscholastic team squads are excused from the physical education class periods during the duration of the sport in which they are participating. However, the majority of the boys are on some team squad throughout the year. The team squads are composed largely of juniors and seniors. Sophomores and freshmen are permitted on the squads if they have the ability to compete on fairly even terms with the other squad members.

The after-school intramural program for junior and senior girls is similar to that of the subfreshman, freshman, and sophomore girls. The activities are partly governed by the Girls' Athletic Association which also promotes many social functions and athletic competition among all the high school girls.

Tests and measurements are used to some extent throughout the elementary and high school. The pupils are tested on certain fundamentals of some activities. They are given a rating in all activities which considers largely their performance in game situations. Rating scales are used for each pupil which attempt to measure certain social and emotional traits.

THE program of body mechanics in the Laboratory Schools is largely preventive. Attention is given to three general types of pupils, those that have and maintain the proper body mechanics, those that have functionally poor body mechanics, and those that are set or

static cases of poor body mechanics. Although the emphasis is placed largely on prevention, some attention is given to corrective cases. However, pupils are no longer segregated into special classes for corrective purposes. Experience with special corrective classes has taught that the social harm resulting from being placed in a corrective class frequently outweighed the physical good obtained. Results were always doubtful due to a lack of objective methods of measuring improvement. For that reason it was felt that special attention in regular physical education activity and the proper educational program would be an improvement over the special corrective classes as it is not likely that the proper body mechanics can be obtained or maintained by corrective classes or the administering of a few formal exercises to a group. Too many factors affecting body mechanics enter in that cannot be controlled by such. Chief among these are nutrition, fatigue, infections, disease, sight, hearing, diet, sleep, rest, clothing, and the number of hours spent bending over a schoolroom desk.

The education part of the body mechanics program begins during the time of the physical examinations at the beginning of the school year. The physicians rate the general posture of each pupil according to the posture standards published by the Children's Bureau of the United States Department of Labor. The ratings on this scale are rough and do not lend themselves to scientific treatment. They do, however, give the pupil a mark which he can visualize and which may help to enlist his interest in improving and maintaining the proper positions. The physicians usually offer some advice to each pupil on how to assume good postural positions, for it has been found in our school that many pupils do not know how to assume and maintain good posture.

The classroom teachers are posture conscious and assist in carrying out the program. Their part is largely to help keep the children conscious of their posture. This is very difficult in that it is likely to result in nagging which the children will eventually resent. The teachers also place their pupils in the classroom so that any with impairment of hearing or sight may be in advantageous positions as these particular types of physical defects are conducive to poor posture if the child is forced into a strained position in attempting to hear or see.

A part of a unit in a health course taught in the fifth grade deals with body mechanics. Readings are assigned which stress the value of good posture during the growing period, the social and aesthetic value of good posture, the proper carriage of the body while walking, running, and doing various other kinds of physical activity, the proper way to bear the weight while standing and sitting, the relationship of posture to sleep, rest, and diet, and the value of relaxation, which includes a brief study of mental habits.

Occasional meetings of the Parent-Teachers' Association are used for lectures and discussion of body mechanics. These meetings help to educate and enlighten the parents as to the school program. They also serve to bring about better cooperation between the home and school, which is a very necessary part of the program as the child may form bad habits of posture more quickly at home than at school. It is important in these meetings to give the parents information of such a nature that they will not become over-anxious about their children. Otherwise nagging is likely to result which in the end will defeat their purpose. The information given to parents stresses the relationship between posture and general health, nutrition, fatigue, sleep, rest, infection, diet, disease, sight, hearing, clothing, and exercise.

Motion pictures secured from the Children's Bureau of the United States Department of Labor are occasionally shown to the children, usually during assembly periods. The pictures help to teach the children to recognize good and bad body positions.

Lectures by the school physicians and the Laboratory School's consulting orthopedist are sometimes given to the high school pupils. The nature of these lectures at any given time depends on the status of the educational program and the judgment of the physicians as to the particular need at the time of the lecture.

The educational phase of the body mechanics program in the regular physical education classes supplements the work of the school physicians, the orthopedic consultant, and the classroom teachers. In giving group instruction the teachers frequently review the positions that make up good posture and give the pupils an opportunity to assume these positions. In the lower grades, the points of good body mechanics are brought out during the playing of certain games conducive to good posture. In the upper elementary grades and high school, good form in the fundamentals of sports is stressed, for the proper form in doing fundamentals usually assures the proper body mechanics. This does not always hold true, however, as there are certain national sports wherein the fundamental elements are conducive to poor body mechanics.

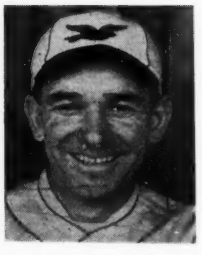
A LARGE part of the educational work in the regular physical education classes is individual. The results of the physical examinations give the teachers a knowledge of the status of each pupil. The instruction given to each child is governed to an extent by his individual needs. The child with good body mechanics does not need the same specific information as a child with poor body mechanics and the pupil with good form in physical education activities does not need the same instruction as one who has poor form. Therefore, with those that have the proper body mechanics the aim is to keep them body-mechanics conscious—a process which does not require as much stress as attempting to point out the path of improvement and maintenance to those with varying degrees of poor body mechanics.

In past years the physical examination records have revealed an increasing tendency toward pronated and weak feet among our pupils. In an effort to improve this condition the gymnasium shoes worn have been given careful consideration. Many of the gymnasium shoes on the market now evidently were made primarily with the idea of meeting competition. Apparently the building of

(Continued on Page 280)

Keeping the Baseball Squad Active

By C. R. CRAWFORD
Columbus Baseball Club
Columbus, Ohio



C. R. (Pat) Crawford

ONE of the major problems confronting those who coach baseball is keeping the squad actively engaged in worth-while activities throughout the practice session. Inasmuch as baseball is a highly skilled game, the players must be given ample opportunities to practice those skills which they will perform during baseball games. All baseball players have to throw, catch, field, and bat baseballs. They also have to run and slide. Their ability to play the game depends upon their ability to perform these skills, therefore it behooves the coach to give the players considerable practice in the performance of these activities. The purpose of this presentation is to suggest to coaches various drills which should aid them in constructing efficient practice schedules of those activities, the learning of which is indispensable to players if they are to perform skillfully.

Some of these drills are used by major league baseball teams in spring training, while others have been used by the writer in coaching high school and college baseball. It is not intended that these drills be presented in the sequence which they are given here. It is suggested that the coach select those drills which are suited to the interests, needs, and capacities of the players. The drills may be grouped differently if the coach chooses. Those drills which may be carried on simultaneously are placed in groups. It is assumed that the coach has only one baseball field, and that he has a large squad.

Group I.

Supply each pair of players with a baseball for the purpose of warming up, and practicing accurate throws. The infielders throw to each other, the outfielders to outfielders, one catcher warms up the first pitcher to be used on the mound in drill work or batting practice, the other catchers throw to each other, and the pitchers organize "pepper" games.[1] After the outfielders, infielders, and catchers are thoroughly warm, they increase their throwing distances, each pair practicing the throws they have to make in playing their positions.

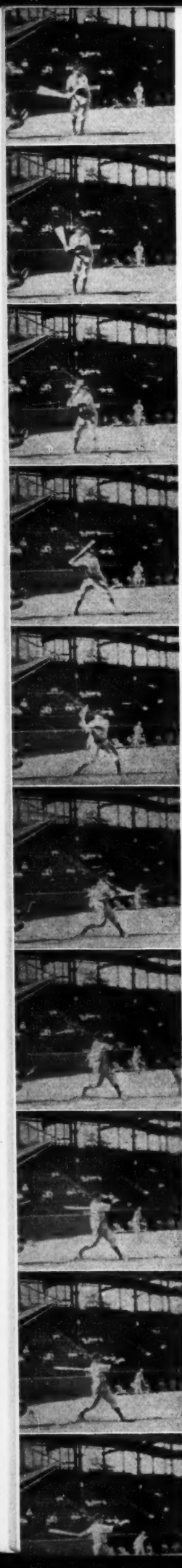
Group II.

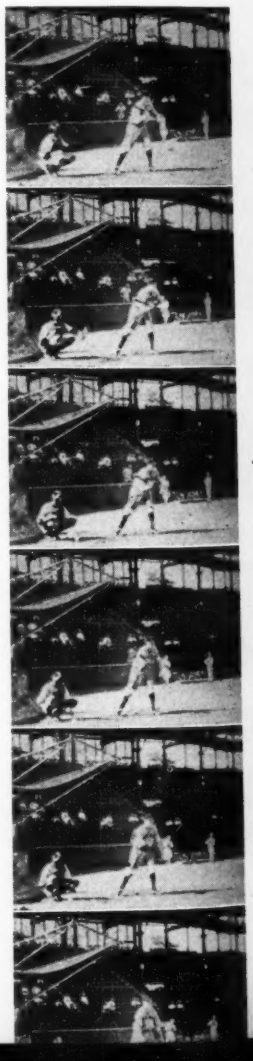
A catcher, pitcher, first baseman, second baseman, and a shortstop assume their respective positions, other players act as base runners at first base with the exception of the next pitcher who is to occupy the mound and his catcher. The pitcher takes his position on the mound and either throws to first base or to the plate. The base runner gets a lead and attempts to steal second. The object of this group of drills is to give: (1) pitcher practice in throwing to first base; (2) catcher practice throwing to second base; (3) first baseman practice receiving throws from the pitcher and tagging base runners; (4) shortstop and second baseman practice receiving throws from the catcher and tagging base runners; (5) base runners practice taking leads off first base, getting back to the base, and sliding into second base.

Group III.

Use the same set-up as in Group Two, but with a runner on second base also. The pitcher takes his position on the mound and either throws to the plate or to second base. The purpose of these drills is to give: (1) pitcher practice throwing to second base; (2) shortstop and second baseman practice holding base runners on second base and tagging base runners as they slide back

[1] Games in which one or more hitters stand about forty feet from several fielders and hit them ground balls. The player who fields the ball may either throw the ball to a hitter, or toss it to another fielder who in turn throws it back to a hitter. The hitter stands just as he would stand at the plate.





Action shots of some major league players, courtesy of Rogers Hornsby.

into the base; and (3) base runners practice getting leads off second, as well as practice in getting back to the base.

Group IV.

Assemble pitchers at the mound. Infielders and catchers assume their positions. The coach stands at the plate in the batter's box with a baseball in his hand. The pitcher also has a ball; he delivers it to the catcher, and as the pitch arrives at the plate the coach may do one of several things. He may: (1) toss the ball on the ground in front of the plate or down either base line just as a batter would bunt; (2) throw the ball on the ground in the vicinity of first base, which the first baseman fields and tosses to the pitcher as he covers first base; or (3) throw the ball on the ground directly to the pitcher or to either side of him. Each pitcher takes his turn on the mound. The players not participating in the drill act as base runners, being placed by the coach. The coach announces the score, inning, number of outs, and the bases occupied. This group is designed to give: pitchers and infielders practice fielding their positions, particularly making plays on bunted balls.

Group V.

Shortstop and second baseman assume their positions. The coach stands near the mound and throws ground balls to either the shortstop or second basemen. The player receiving the ball throws to the other one who covers second base and he in turn throws to the first baseman thereby completing the double play. Designate a player to hit fly balls to the outfield from a position back of either first or third base. Other players organize bunting practice at home plate. The players take turns fielding bunts. The object of this group is to give: (1) shortstops and second basemen practice fielding ground balls and executing double plays; (2) first basemen practice stretching out to catch throws from second base; (3) outfielders fielding practice; and (4) pitchers, catchers, and third basemen bunting practice.

Group VI.

Infielders pair off on the infield and throw ground balls to each other. Outfielders engage in bunting practice at the plate. Pitchers go to the outfield and take fielding practice. These drills give: (1) infielders practice in fielding ground balls; (2) outfielders bunting practice; (3) pitchers practice fielding fly balls, and opportunities to condition themselves.

Group VII.

Outfielders, infielders, catchers, and base line coaches take their respective positions. The other players act as base runners. The coach stands at the plate and after announcing the score, inning, and number of outs, hits the ball to the outfield. The purpose of this group of drills is to give: (1) outfielders practice fielding fly and ground balls, also practice making throws to bases; (2) pitchers and extra men practice running bases; (3) infielders practice receiving throws from the outfield, relaying throws, tagging base runners, and making cut-off plays; (4) catchers practice receiving throws from the outfield and tagging base runners; and (5) base line coaches practice directing base runners.

Group VIII.

Third baseman, second baseman, and first baseman take their positions. The outfielders, catchers, and shortstops organize bunting practice at the plate. The pitchers organize "pepper" games. The coach stands off to the side of the plate and hits ground balls to the third baseman. This group of drills gives: (1) the third baseman practice fielding ground balls and starting double plays: (2) the second baseman practice pivoting double plays which originate at third base; and (3) keeps the pitchers warm.

Group IX.

Catchers, infielders, and outfielders organize batting practice. Pitchers and extra players field the balls hit by the batters. Have someone back of the pitcher to pick up the balls and toss them to the pitcher. Ten men is a sufficient number to have engaged in batting practice at a time. Each batter swings three times and makes one attempt to bunt. He may bunt on any pitch. On the last swing or on the attempt to bunt, if that is last, he runs to first base and makes his turn. Off to one side the players waiting for their turns at bat organize bunting practice while on the other side players draw replicas of home plate on the ground and swing bats as if hitting balls. These drills are designed to give players: (1) batting practice; (2) practice making turns at first base; (3) bunting practice; (4) practice swinging bats, which develops batting form.

Group X.

Pitchers and extra players engage in batting practice. Infielders and outfielders assume their respective positions. The bases are unoccupied but the coach announces that imaginary runners are on

(Continued on Page 275)

Pre-Convention Meeting of the National Association of Directors of Physical Education for College Women

Meeting with the Middle-West Association of Physical Education for College Women

April 12, 13, 14, 1936 — Hotel Statler — St. Louis, Missouri

PROGRAM FOR THE NINTH CONFERENCE

Officers of the National Association:
President: Rosalind Cassidy, Mills College.
Vice-president: Alfreda Mosscrop, Alabama College.
Sec.-Treas.: Mildred Howard, Mount Holyoke College.
Officers of the Middle-West Association:
President: Mary R. McKee, University of Missouri.
Vice-president: Helen Barr, Denison University.
Sec.-Treas.: Mabel Shirley, St. Olaf College.

SUNDAY, APRIL 12

10:00 A.M. Meeting of the Board of Directors of the National Association.
11:15 A.M. Meeting of the Board of Directors of the National Association with chairmen of Association Committees.
2:00-3:00 P.M. Registration.

3:00-5:00 P.M. AFTERNOON SESSION.
Theme: "The Physical Education Program and Progressive Trends in Higher Education."
Presiding: Rosalind Cassidy.
3:00-3:30 P.M. General Meeting.
Statement of Business of the National Association.
Statement of Business of the Middle-West Association.
3:30-3:45 P.M. President Middlebush, University of Missouri.
3:45-4:30 P.M. "Recent Trends in College Education," Dr. W. W. Charters, The Ohio State University.
4:30-5:00 P.M. Discussion: Helen Barr, Denison University.
6:30-P.M. Buffet Supper. Guests of Washington University. Women's Building, Washington University.

8:00-9:30 P.M. EVENING SESSION.
Presiding: Alice C. Schriver, Washington University.
8:00-8:15 P.M. Chancellor Throop, Washington University.
8:15-9:00 P.M. "The Place and Process of Physical Education in a General Education Program," Dean Malcolm McLean, University of Minnesota.
9:00-9:30 P.M. Discussion: Mary Jo Shelly, University of Chicago.

MONDAY, APRIL 13

9:00-12:30 A.M. MORNING SESSION.
Presiding: Rosalind Cassidy.
9:00-10:30 A.M. "Long Term Plan for the National Association," C. H. McCloy, State University of Iowa.
10:30-12:30 A.M. Directors Divided.
Group I. Universities and Co-Educational Colleges.
Leader: Helen Hazelton, Purdue University.
Group II. Women's Colleges and Junior Colleges.
Leader: Irene Clayton, Rockford College.
Group III. Teacher's Colleges.
Leader: Helen Jamieson, State Teacher's College, Mankato, Minnesota.
Group IV. Staff Members.
Leader: Gladys B. Bassett, University of Wisconsin.

12:30 P.M. LUNCHEON.

2:00-4:00 P.M. AFTERNOON SESSION.
Presiding: Dr. Gertrude E. Moulton.
2:00-3:00 P.M. "Wisconsin's Use of the Wellesley Posture Test," Dr. Helen D. Denniston, University of Wisconsin.
Discussion Leader: Catherine Snell, University of Minnesota.
3:00-4:00 P.M. "Significance for a Required Program in Physical Education of a Controlled Experiment made at the University of Minnesota," Miss Elizabeth Graybeal, State Teachers College, Duluth, Minnesota.
4:00-6:00 P.M. Business Meeting of Middle-West Association.

EVENING SESSION

7:30 P.M. Dinner (formal).
Presiding: Rosalind Cassidy.
Guests of honor for the National Association: Mary Channing Coleman, Mabel Lee, Agnes R. Wayman.
Guests of honor for the Middle-West Association: Gertrude Dudley, Abby Mayhew.
Greetings and reports:
Eastern Association: Eline von Borries.
Middle-West Association: Mary R. McKee.
Western Association: Violet Marshall.
Southern Association: Alfreda Mosscrop.

TUESDAY, APRIL 14

MORNING SESSION

9:00-12:00 A.M. Business meeting (open to active and associate members).
Regular business.
Reports of committees, followed by discussion:
Standing Committees:
Archery—Edith Hyde.
Publicity—Helen Hazelton.
Requirement—Violet Marshall.
Constitution Revision and Function—Dorothy Ainsworth.
Curriculum Studies—Agnes R. Wayman.
Section Reports:
Eastern—"Expectancy Standards in Physical Education for Entering Freshmen," Helen McKinstry.
Middle-West—"Study of the Curriculum for the Professional Preparation of Teachers of Physical Education," Katherine Hersey.
Western—"The Status of Physical Education for Women in Colleges and Universities," Violet Marshall.
Southern—"Orientation Courses in Physical Education for the General College Student," Catherine E. Morrison.
Other Reports:
National Rating Committee—Dr. Gertrude E. Moulton.
Achievement Standards—Dr. Cozens.

12:30 P.M. LUNCHEON.

2:00-4:30 P.M. AFTERNOON SESSION.
Presiding: Blanche M. Trilling.
2:00-2:45 P.M. "A College President Looks at Physical Education," Dr. Gordon K. Chalmers, Rockford College.
2:45-4:30 P.M. Panel Discussion on Training in Recreation Leadership in Colleges.
Chairman: Elizabeth Halsey.
Members: Alfred O. Anderson, Kansas City; Helen Barr, Denison University; Helen Coops, University of Cincinnati; Vern Hernlund, Chicago Park District; Wilma Haynes, Stephens College; Frank Lloyd, New York University; and Floyd Rowe, Cleveland Public Schools.
4:30 P.M. Adjournment: Rosalind Cassidy.
Meeting of New and Old Boards of Directors of National Association.

The National Convention Program

Forty-First Annual Convention of the American Physical Education Association meeting with the Third Annual Convention of the Central District Association

April 15, 16, 17, 18, 1936 — Hotel Statler — St. Louis, Missouri

CONVENTION THEME: Physical Education and the Enrichment of Living.

GENERAL INFORMATION

Honorary Convention Manager: Mr. A. E. Kindervater, Supervisor of Physical Education, St. Louis Public Schools.

Convention Manager: Philip J. Hickey, Secretary and Treasurer, Board of Education, St. Louis.

Convention Headquarters: Hotel Statler, Room 1538.

Commercial Exhibits: Sixteenth floor. You are urged to get acquainted with the exhibitors and their products.

Educational Exhibits: Parlor A, Mezzanine floor.

Registration: Mezzanine floor. Everyone is requested to register immediately upon arrival. The Registration Desk will be open on Wednesday, April 15, at 8:00 A.M. Registration fees are as follows:

A.P.E.A. members	$1.00
Members of the profession who are not members of the A.P.E.A.	2.00
Persons not members of our profession	1.00
Students who are not members of A.P.E.A.	.50
Student members of A.P.E.A. (Upon registration and procurement of badge.)	.25
Students for Saturday meetings only (upon registration and procurement of badge)	No charge

A convention badge is required for admission to all meetings, social functions, and demonstrations. Badges, programs, and other convention material will be given delegates upon registration.

Information Service: Lobby floor. Consult Bulletin Board daily for program changes and other announcements. Ask the information clerks for any other information desired.

Post Office and Lost and Found: At Information Desk, Lobby.

Women's Reception Room: To be designated.

Meetings: All meetings will begin promptly, and doors will be closed. Doors will be opened for a minute after each address. Your cooperation is asked in making it possible for the presiding officers to follow these instructions.

Hospitality Arrangements: Information regarding reunion luncheons, group breakfasts, and dinners is available at the Information desk. The following groups have already scheduled such meetings:

Teachers College, Columbia University
Dance Section
National Officials' Rating Committee
Springfield College Alumni
Delta Psi Kappa
George Williams College
State University of Iowa

Banquet: The Convention Banquet will be held on Thursday, April 16, at 7:00 P.M. Tickets are $1.75, and may be obtained at Information Desk.

Special Program for Wives and Friends of Delegates: Information Desk.

School Visitation Program: Has been mailed to all members. Additional copies at Information Desk.

Pre-Convention Meeting Programs: see pages 255 and 256.

TUESDAY, APRIL 14

9:30 A.M. Convention and Program Committees. (Room 204)
2:30 P.M. A.P.E.A. Executive Committee Meeting. (Room 202)
7:30 P.M. A.P.E.A. Governing Board Meeting (Room 206)

WEDNESDAY, APRIL 15

9:00 A.M. A.P.E.A. Governing Board Meeting. (Room 206)
2:00 P.M. A.P.E.A. Legislative Council Meeting. (Rooms 202, 204)
7:00 P.M. Legislative Board of Women's Athetic Section—Place to be announced.

8:00 P.M. OPENING GENERAL SESSION
Municipal Auditorium

Presiding: Agnes R. Wayman, President.
Greetings from the Mayor, Hon Bernard F. Dickmann.
Greetings from Dr. Henry J. Gerling, Superintendent of Schools, St. Louis.
Presidential Address: Miss Agnes R. Wayman.
Presentation of Honor Awards.
Address: President J. L. Meader, Russell Sage College.

9:30 P.M. INFORMAL RECEPTION AND DANCE

THURSDAY, APRIL 16

BREAKFAST MEETINGS

7:00-8:30 A.M. **Administrative Directors' Society.** (Adam Room, 17th floor)
Presiding: August H. Pritzlaff, Director of Physical Education, Chicago Public Schools.
Secretary: Julius Kuhnert, Supervisor of Physical Education, Mt. Vernon, New York.
Address: "Ability Grouping and Individualism in Physical Education," Grover W. Mueller, Director of Physical and Health Education, Philadelphia, Pennsylvania.
Discussion.

7:00-8:30 A.M. **Dance Section** (Daniel Boone Room, South Mezzanine Floor.

SECTION MEETINGS

9:00-10:30 A.M. **Research.** (Rooms 102, 104)
Presiding: Dr. F. W. Cozens, University of California at Los Angeles.
"Analytical Studies of the Stunt-Type Test as a Measurement of Motor Educability," Dr. C. H. McCloy, State University of Iowa.
"Measurement of Growth in Physical Education for Wom Dr. Elizabeth Graybeal, Duluth State Teachers College.
"A Study of the Relation of Certain Measurements of College Women to Throwing Ability," Dr. Katherine Watson, MacMurray College for Women, Jacksonville, Illinois.
Election of Officers for 1937, National and Central District Sections.
"A Critical Analysis of Test Elements Used in Physical Education," Dr. Arthur J. Wendler, University of Iowa.
"A Method of Measuring Form in Fundamental Athletic Skills in College Women and a Comparison of Teaching Methods Used to Develop Ability in Fundamental Skills," Professor Ruth B. Glassow, University of Wisconsin.

"The Establishment of Bases for Classification of Junior and Senior High School Boys into Homogeneous Groups for Physical Education," Dr. Joy W. Kistler, University High School, State University of Iowa.

9:00-10:30 A.M. **Recreation** (Rooms 202, 204, 206)

Chairman: Alfred H. Wyman, Community Council, St. Louis.

Topic: "Criteria for Group Recreation."

Summarizer: Lester C. Gardner, Wesley House, St. Louis.

Attention will be focused upon the basic issues underlying the organization of groups in leisure-time activities. The functions and techniques of recreation workers as well as the methods used in breaking down barriers between individuals and common-interest groups will be analyzed in a panel discussion.
Panel Discussion.

Presiding: George E. Simmons, Y.M.C.A., St. Louis.

"Teaching of Skills," Miss Helen Manley, Director, Physical Education, Public Schools, University City, Missouri.

"Social Implications of Recreation," H. D. Edgren, Assistant Professor, Physical Education, George Williams College.

"Character in the Participants and Participation," Dr. Theodore F. Lentz, Jr., Associate Professor of Education, Washington University, St. Louis.

Summarizer: Dr. E. C. Lindeman, Director of Community Organization for Leisure, W.P.A., Washington, D.C.

Election of Officers for 1937, National and Central Districts.

9:00-10:30 A.M. **Men's Athletics** (Daniel Boone Room, South Mezzanine Floor)

Chairman: George E. Little, Director of Physical Education, Rutgers University, New Brunswick, New Jersey.

Presiding: Prof. Chester L. Brewer, Professor of Physical Education, University of Missouri.

Summarizer: Lloyd L. Messersmith.

9:10-9:30 A.M. "College Athletics from the Viewpoint of the Public," Branch Rickey, Vice-President, St. Louis Cardinals and former College Coach at University of Michigan and Ohio Wesleyan.

9:35-10:00 A.M. "Basketball Technique," Professor Lou Andreas, Coach of Basketball for the past sixteen years at Syracuse University.

10:05-10:30 A.M. "Football Technique." (A prominent football coach will present a paper and exhibit movies.)

9:00-10:30 A.M. **Women's Athletics.** (Ball Room, 16th Floor.)

Presiding: Eline von Borries, Goucher College.

General Topic: Reports of Progress on Work being carried by the Section during the Past Year.

Election of Officers, National and Central Districts.

Speeches and Committee Reports.

Rules and Editorial Committee, Marjorie Hillas, Columbia University.

Special Committee on Content, Marjorie Hillas.

Special Committee on Motion Pictures, Gladys Palmer, The Ohio State University.

Special Committee on Research, Dorothy Humiston, Iowa State Teachers College.

Special Committee on Standards, Laurentine Collins, Detroit Public Schools.

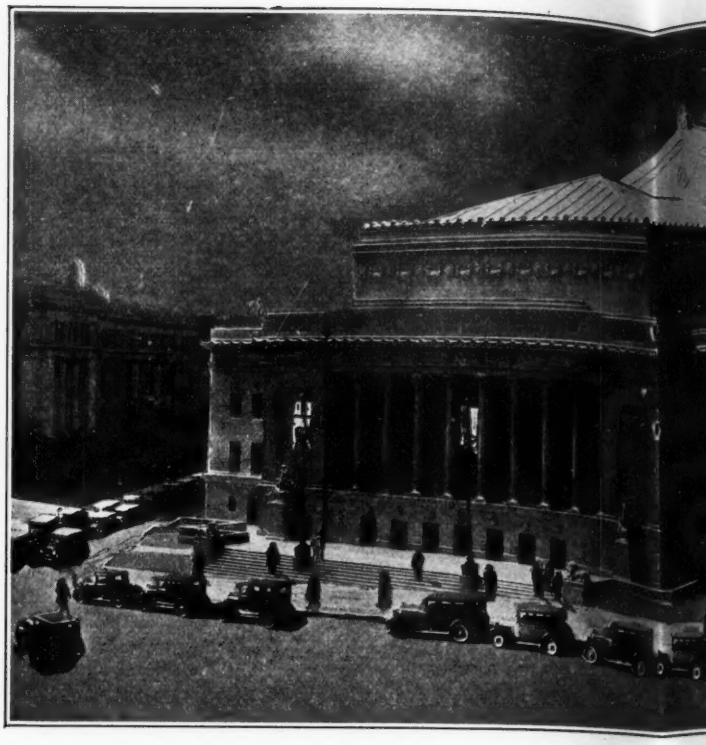
Special Committee on Publicity, Alma Porter, Massachusetts Department of Education.

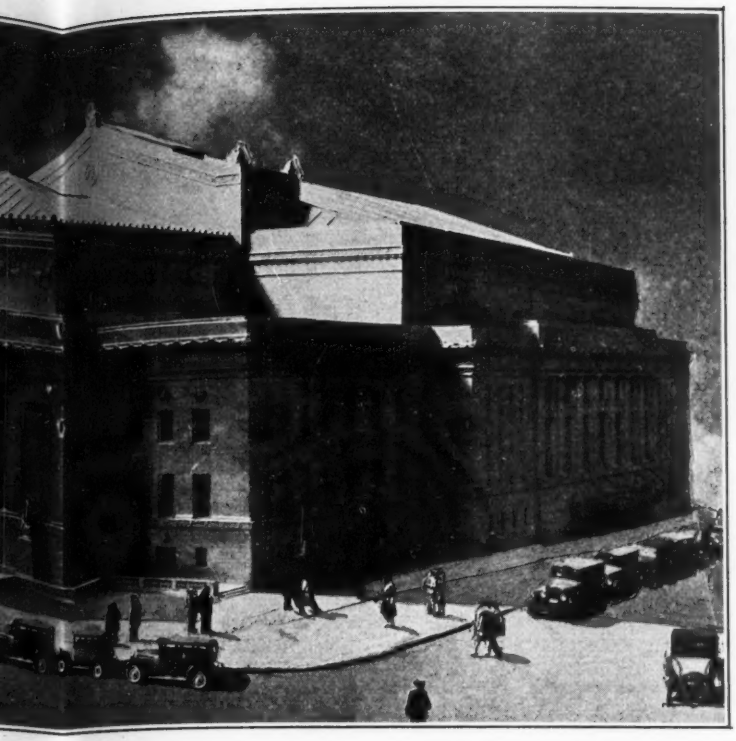
"Publicity—Your Right Hand Man," Janet Owen, sports writer for the *New York Herald Tribune* and Editor of the *Sportswoman*.

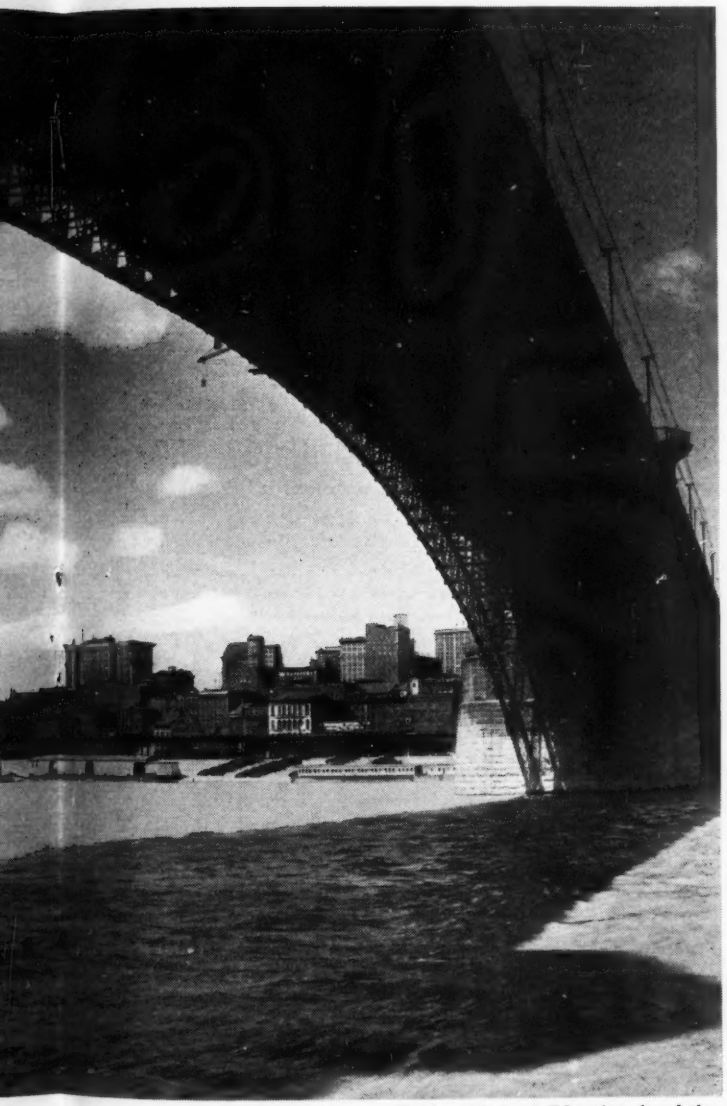
10:45-12:00 A.M. GENERAL SESSION. (Ball Room)

Presiding: W. G. Moorhead, President-Elect.

10:45-11:15. "The Organism vs. the Machine," Dr. Eduard C. Lindemann, New York School for Social Work, and Director of Community Organization of Leisure-Time Interests, Washington, D.C.







—Courtesy National Education Association.

12:30-2:00 P.M. SCHOOL AND COLLEGE LUNCHEONS. Teachers College, Columbia University (Rooms 102, 104, 106), Springfield College Alumni (Fifth Floor, Town Club, 1120 Locust Street), George Williams College, State University of Iowa, and others.

12:30 P.M. Luncheon Meeting of Old and New Governing Boards.

SECTION MEETINGS

2:15-4:00 P.M. **Camping.** (Rooms 202, 204)

Presiding: Mary Stewart, University of Iowa; Chairman Camping Section of Central District.

"The Progressive Camp Program," Barbara E. Joy, Director of the Joy Camps, Hazelhurst, Wisconsin.

"The Health Program in Camp," Dr. F. H. Ewerhardt, Director Camp Minnewonka, Three Lakes, Wisconsin.

2:15-4:00 P.M. **Dance** (Ballroom, DeSoto Hotel)

Presiding: Ruth Diamond, Municipal University of Omaha; Dance Chairman, Central District.

Summarizer: Miss Claudia Moore, Department of Physical Education for Women, University of Nebraska.

"The Revision of the Detroit Course of Study in Elementary Rhythms and Dance," Miss Delia Hussey, Supervising Critic in Health Education, Detroit Public Schools.

Demonstration: "Elementary School Dancing as a Part of the Entire School Program," Miss Marguerite Behrensmeyer, Community School, St. Louis, Missouri.

Open Discussion of Elementary School Dance Problems:

Chairman: Mary Jo Shelly, Department of Physical Education for Women, University of Chicago.

2:15 4:00 P.M. **Health Education.** (Ball Room, 16th Floor)

Presiding: A. W. Thompson, Chairman.

Panel Discussion: "The Organization and Administration of Health Education to Meet Present Day Needs."

Chairman: Dr. Clifford Brownell, Teachers College, Columbia University.

Panel Members: Dr. Allen G. Ireland, State Department of Education, New Jersey.
Dr. Mabel Rugen, University of Michigan.
Dr. Harriet S. Cory, Missouri Social Hygiene Association.
Fannie B. Shaw, National Tuberculosis Association.
Reba F. Harris, State Department of Health, Kentucky.

Commentator: Dr. C. C. Wilson, Hartford, Connecticut.

Business Meeting and Election of Officers.

2:15-4:00 P.M. **Teacher Training.** (Adam Room)

Presiding: Dr. Margaret Bell, University of Michigan.

2:15-3:00 P.M. "An Analysis of the National Study of Professional Education in Health and Physical Education—National Committee Report on Standards," Dr. D. Oberteuffer, The Ohio State University.

3:00-3:45 P.M. A Review of Dr. Oberteuffer's paper by a representative of the Standards Committee.

2:30-5:00 P.M. **Demonstration by Section on Women's Athletics.** (Washington University)

Presiding: Marjorie Hillas, Department of Physical Education, Teachers College, Columbia University, Chairman, Rules and Editorial Committee.

In charge of demonstrations:

2:15-2:45 P.M. *Water Sports*: Marjorie Mayer, Chairman of the Central District Water Sports Committee.

a) The Teaching of Diving, C. C. Hubbard, Omaha Technical High School, Omaha, Nebraska.

b) The Judging of Diving, Katharine W. Curtis, Wright Junior College, Chicago, Illinois.

Top: The St. Louis Municipal Auditorium.
Below: Under the Arch of the Eads Bridge.

2:50-3:10 P.M. *Speedball*: Helen Barton, Chairman, Speedball Committee; State Teachers College, Clarion, Pa. Girls for demonstration supplied by Helen Manley, University City.

3:15-3:45 P.M. *Basketball*: Dorothy Davis, Missouri State Basketball Chairman. Girls for the Demonstration supplied by Emilie Vossbrink, Webster Groves High School.

3:50-4:10 P.M. *Badminton*: Julia Post, Chairman, Athletic Games Committee; Winthrop College, Rock Hill, S.C. Girls for Demonstration supplied by Ann Liversedge, Maryville College.

4:15-4:30 *Mass Games*: Julia Post, Chairman Athletic Games Committee. Girls for demonstration supplied by Miss Lucille Schreiner, Gardenville School, St. Louis, Mo.

4:35-5:00 P.M. *Archery*: A Method of Teaching Archery to Groups. Elinor M. Schroeder, Chairman Individual Sports Committee. Cia Craft, Instructor in Archery, Sargent College, Boston University. Girls supplied by Washington University, St. Louis, Mo.

4:00-5:30 P.M. **Demonstrations of Tests and Measurements** (Ball Room)

The purpose of this meeting is to demonstrate and discuss devices helpful to teachers in their efforts to measure changes effected in pupils. The program is arranged in two divisions.

Part I.

1. Organic Efficiency Tests, Dr. J. H. McCurdy and Mr. Leonard A. Larson, Springfield College.
2. Physical Capacity Tests.
   a) For Boys—Charles D. Giauque, George Williams College, Chicago; Mr. Harold K. Jack, State Supervisor of Physical Education in Minnesota; Dr. Walter A. Cox, Director of Physical Education, Albany, New York; Ellis Champlin, Director of Physical Education in High Schools, Buffalo, New York.
   b) For Girls—Elizabeth Zimmerli, University of Minnesota; Mrs. Ivalclare Sprow-Howland, Battle Creek College, Battle Creek, Michigan; Joanna Thayer Dyer, Arnold College, New Haven, Connecticut; Helen Chesky, Public Schools, Schenectady, New York.
3. A Scale for Measuring Anterior-Posterior Posture, using the film strip camera, C. H. Christenson, Superintendent of Schools, White Bear Lake, Minnesota.
4. Footprints, Mrs. Ivalclare Sprow-Howland, Battle Creek College, Battle Creek, Michigan.

(NOTE: Members attending this section will be divided into groups and guided from one demonstration to another so they will have an opportunity to observe all of them.)

Part II—Summaries.

1. Organic Efficiency Tests, Mr. Leonard A. Larson, Springfield College.
2. Physical Capacity Tests, Dr. Walter A. Cox, Director of Physical Education, Albany, New York.
3. Posture, C. H. Christenson, White Bear Lake, Minnesota.
4. Guidance Techniques in Health and Physical Education, Thomas A. Cureton, Springfield College.

4:00-5:30 P.M. **American Academy of Physical Education** (closed meeting, Room 206)

Presiding: Dr. R. Tait McKenzie.

7:00 P.M. BANQUET. (Ball Room)

Toastmaster: Dr. F. W. Maroney, Teachers College, Columbia University.

"Place of Sport in American Life," Branch Rickey, Vice-President, St. Louis Cardinals.

Address by Mr. A. E. Kindervater, Supervisor, St. Louis Public Schools.

10:00 P.M. Dancing. (Ball Room)

FRIDAY, APRIL 17

7:00-8:30 A.M. BREAKFAST MEETINGS.

7:00-8:30 A.M. **Y.M.C.A. Physical Directors' Society.** (Y.M.C.A.)

Presiding: C. A. Neavles, Downtown Branch Y.M.C.A., St. Louis.

"Are There Any Fundamentals in the Association's Physical Education?" Dr. C. H. McCloy, State University of Iowa.

"The Implications of the Revised Agreement with the A.A.U.," Dr. John Brown, Jr., Secretary, Department of Physical Education, National Council, Y.M.C.A.

9:00-10:30 A.M. GENERAL SESSION. (Ball Room)

Presiding: Louis E. Hutto, President Central District, A.P.E.A.

"The Educator Looks at Physical Education," Miss Agnes Samuelson, State Superintendent of Public Instruction, Des Moines, Iowa; President, National Education Association.

"An Educational Alliance," Mary Josephine Shelly, University of Chicago.

10:45 A.M.-12:15 P.M. SECTION MEETINGS

10:45 A.M.-12:15 P.M. **Research.** (Rooms 102 and 104)

Presiding: Professor Granville B. Johnson, University of Denver.

"The Effect of Tension on the Response of Muscle Tissue," Dr. W. W. Tuttle and Mr. D. VanDolen, State University of Iowa.

"A Study of the Mechanics of Graceful Walking," Miss Ruth Bass, Kent State College, Kent, Ohio.

"An Investigation on the Interpretation of Vital Capacity," Professor T. K. Cureton, Jr., Springfield College.

"The Effect of Training in Certain Sport Skills on Reaction Time, Speed, and Agility of Large Muscle Groups," Miss Virginia Peaseley, University of Michigan.

"Studies in Strength Testing for High School Girls," Mrs. Theresa Anderson, North High School, Des Moines, Iowa.

"A Study in Strength Testing for Women," Miss Aileen Carpenter, Southern Illinois State Teachers College, Carbondale, Ill.

"Predicting Potential Total Strength of Adult Males From Skeletal Build," Mr. Guy Lookabaugh, Northeastern Teachers College, Tahlequah, Oklahoma.

10:45 A.M.-12:15 P.M. **Dance.** (Rooms 202, 204, 206)

Chairman: Ruth L. Murray, Assistant Professor of Health Education, Wayne University, Detroit.

Summarizer: Charlotte MacEwan, Department of Hygiene and Physical Education, Wellesley College.

"Physical Education and the Emergence of the Modern Dance," George W. Beiswanger, Ph.D., Head of the Department of Philosophy, Monticello College, Godfrey, Ill.

Discussion led by Dr. Beiswanger.

Initial Report of the High School Dance Study: Jeannette B. Saurborn, University High School, University of Michigan.

10:45 A.M.-12:15 P.M. **College Men's Physical Education.** (Daniel Boone Room, South Mezzanine Floor)

10:45 A.M. Address: Dr. George R. Throop, Chancellor, Washington University, St. Louis.

11:10-11:20 A.M. "College Physical Education Should be Required for Four Years," Dr. Harry A. Scott, Rice Institute, Houston, Texas.

11:20-11:30 A.M. Discussion: Dr. C. L. Brewer, University of Missouri.

11:30-11:40 A.M. "Physical Education Should be Voluntary, Not Required," Dr. J. R. Sharman, University of Michigan.

11:40-11:50 A.M. Discussion: Dr. Edward Voltmer, University of Iowa.

11:50-12:00 A.M. "Is College Physical Education Accomplishing Its Objectives?" Dr. Frederick Rand Rogers, Boston University.

12:00-12:10 P.M. Discussion: Dr. C. L. Brownell, Teachers College, Columbia University.

12:10-12:15 P.M. Business Meeting.

10:45 A.M.-12:15 P.M. **Public Schools.** (Ball Room)

Presiding: August H. Pritzlaff, Director of Physical Education, Chicago Public Schools.

"Basic Physical Education Principles for Elementary School Principals," Miss Grace Stafford, Associate Director of Physical Education, Gary, Indiana.

"Some Problems in Interpreting Physical Education in Building a Program," Mr. Walter S. Knox, Director of Physical Education, North Texas State Teachers' College, Denton.

"Promoting Public Relations," Laurentine B. Collins, Assistant Supervisor of Physical Education, Public Schools, Detroit.

Business Meeting.

11:00 A.M.-12:30 P.M. **Camping Section Demonstration.** (Y.M.C.A. Pool, 16th and Locust Streets.)

Presiding: Barbara E. Joy, Joy Camps.

Water Safety Demonstration, in charge of Capt. Fred C. Mills, Director of Health and Safety Service, Boy Scouts of America.

12:30 P.M. LUNCHEON MEETING, old and new Executive Committees.

SECTION MEETINGS

1:30 P.M.-3:00 P.M. **Teacher Training.** (Rooms 202, 204, 206)

Presiding: Mr. N. P. Neilson.

"Recommendations for the Professional Education of Elementary School Teachers in Health and Physical Education," Miss Marjorie Bouvé, Bouvé-Boston School of Physical Education.

"Suitable Degrees for Undergraduates and Graduates in Physical Education," Dean Ernst Hermann, Sargent College of Boston University.

"Presentation of National Rating Committee Plans for the Rating of Institutions." N. P. Neilson, Stanford University.

Discussion.

1:30-3:00 P.M. **Physical Education and Recreation in Rural Schools and Communities.** (Assembly Room, Board of Education)

Presiding: B. G. Leighton, Virginia, Minnesota.

Secretary: Willis E. Dugan, Director of Rural Physical Education, St. Cloud State Teachers' College and Editor of *Recreative Physical Education Journal*, St. Cloud, Minnesota.

"Physical Education in Rural School and Community," Harold K. Jack, Director Health and Physical Education, Minnesota State Department of Education.

Symposium discussion: Agnes Samuelson, Superintendent of Public Instruction for Iowa, and President, National Education Association; Mabel Lee, Director of Physical Education for Women, University of Nebraska; Louis E. Hutto, Supervisor of Physical Education, Des Moines Public Schools, Des Moines, Iowa; and officers of the section.

The "Iowa Plan" for rural school physical education and health education will be presented during the discussion.

1:30-3:00 P.M. **Therapeutics.** (Adam Room 17th Floor)

Presiding: Charles D. Giauque, Professor of Health and Physical Education, George Williams College, Chicago.

"The 'All or None' Theory of Corrective Physical Education," George T. Stafford, Associate Professor of Physical Education, University of Illinois; assisted by Dr. Harlan G. Metcalf, Associate Professor of Physical Education, The Ohio State University.

"The Physiological Basis for Physical Therapy," illustrated with motion pictures, John S. Coulter, M.D., Northwestern University Medical School; Chairman, Council on Physical Therapy, American Medical Association.

"A New Approach to Posture," Dr. C. H. McCloy, Research Professor of Anthropometry and Physical Education, State University of Iowa.

Business meeting with election of officers.

1:30-3:00 P.M. **Intramural Directors' Group Combined with Men's Athletic Section.** (Daniel Boone Room, South Mezzanine)

Presiding: H. Harrison Clarke, Director of Intramural Athletics, Syracuse University.

Secretary: Lloyd L. Messersmith, Director of Intramurals, De Pauw University.

"Some Objectives of Intramural Sports," Prof. Paul R. Washke, Director of Men's Gymnasium, University of Oregon.

"An Intramural Program for a High School," DeForrest Showley, Director of Intramural Athletics, New Trier Township High School, Winnetka, Illinois.

"Intramural Athletics for a State Teachers College," L. W. Olds, Michigan State Normal College, Ypsilanti.

"Sigma Delta Psi—the National Honorary Athletic Fraternity," M. L. Clevett, Intramural Director, Purdue University.

PRE-CONVENTION MEETING OF THE SOCIETY OF STATE DIRECTORS OF PHYSICAL AND HEALTH EDUCATION

Daniel Boone Room, South Mezzanine Floor.

George F. Hendricks, President.

Jessie Garrison, Vice-President.

James E. Rogers, Secretary.

WEDNESDAY, APRIL 15

9:15-12:30 A.M. General Meeting.

Introductory Remarks, George F. Hendricks, President.

Report of the Secretary, James E. Rogers.

9:30-10:45 A.M. Round Table Discussion: "Urgent Problems of New Directors."

Chairman: Dr. D. Oberteuffer.

10:45-11:45 A.M. Discussion: "How can Physical Education Contribute to Safety Education?"

Chairman: George F. Hendricks.

Leaders: Dr. A. G. Ireland, New Jersey; Dr. Frank Lloyd, New York University; Dr. Herbert J. Stack, New York City.

11:15-12:15 A.M. Discussion: "How Can We Improve State Programs of Physical and Health Education?"

Chairman: Dr. A. G. Ireland.

Leaders: Dr. Hiram A. Jones, New York; Major E. V. Graves, Virginia; Thomas Mahan, Indiana.

12:30-2:30 P.M. Luncheon Meeting.

Chairman: George F. Hendricks.

"What Constitutes a Modern Progressive Physical Education Program?" Dr. Henry J. Gerling, Superintendent, St. Louis Public Schools.

Reports of Recent Developments in State Physical and Health Education Programs:

Improvement in Certification—W. G. Moorhead, Pennsylvania.

Girls' Programs—Jessie Garrison, Alabama.

Adult and Community Physical Education—W. H. Orion, California.

New Developments in New York—Dr. Hiram A. Jones.

Rating Report: N. P. Neilson, California.

(NOTE: All past State Directors are ex-officio members and are cordially invited to attend and participate in the meetings. Please advise the Secretary as to necessary luncheon reservations.)

"The Administration of an Intramural Program in a Liberal Arts College," Arthur S. Daniels, Director of Intramural Athletics, Allegheny College.

Summarizer: M. L. Clevett, Intramural Director, Purdue University.

Intramural Displays: Displays illustrating many phases of intramural athletics as practiced in various schools, colleges, and universities in the United States will be presented. Lloyd S. Messersmith, Director of Intramurals at De Pauw University, is in charge of arranging these displays.

1:30-3:00 P.M. **Women's Athletics.** (Ball Room)

Presiding: Marjorie Camp, State University of Iowa; Chairman, Section on Women's Athletics, Central District.

"Recreation as a Means of Social Adjustment," Dr. Neva L. Boyd, Assistant Professor of Sociology, Northwestern University.

Summarizer: Elinor M. Schroeder, Wellesley College; Secretary, National Section on Women's Athletics.

3:15-5:30 P.M. **Dance.** (Open Meeting and Demonstration, Ball Room)

PRE-CONVENTION MEETING OF THE ADMINISTRATIVE DIRECTORS SOCIETY

(Rooms 202, 204)

WEDNESDAY, APRIL 15

10:00-12:00 A.M. General Meeting.

Chairman: August H. Pritzlaff, Director of Physical Education, Chicago Public Schools.

Secretary: Julius Kuhnert, Supervisor of Physical Education, Mt. Vernon, New York.

Address: "Office Practices of the City Administration of Health and Physical Education," Vaughn S. Blanchard, Director of Health and Physical Education, Detroit Public Schools and Wayne University.

Address: "Professional Training of Physical Education Teachers," Leon Kranz, Chairman of the Department of Physical Education, in Charge of Teacher Training, Northwestern University. Points of Interest to City Directors.

Committee Report: "Standards and Policies to be Used in the Administration of Recreational and Leisure-Time Training Programs," Dr. C. M. Miles, Albany, New York.

Discussion.

Business Meeting.

Presiding: Ruth L. Murray, Wayne University.

Summarizer: Charlotte MacEwan, Wellesley College.

"The Ancient Art of Modern Dance," John Martin, Dance Critic, *New York Times*.

Discussion led by Mr. Martin.

Dance Symposium:

Stephens College—Mary Standring, Instructor.

Municipal University of Omaha—Ruth Diamond, Instructor.

University of Illinois—Ione M. Johnson, Instructor.

Monticello College—Barbara Page Beiswanger, Instructor.

Summary of Symposium: Mr. Martin.

5:00 P.M. Showing of film of Russian Physical Education. (Adam Room)

6:00 P.M. DINNER MEETINGS.

American Academy of Physical Education. (Daniel Boone Room, South Mezzanine)

Presiding: Dr. R. Tait McKenzie.

Women's Division, N.A.A.F. (Ball Room)

Presiding: Miss Edith Gates.

Symposium: the activities of our state committees in the past year; the problems in girl's athletics they have met; what solutions have been found to meet these problems.

Eight or ten state chairmen will give reports of N.A.A.F. work in the form of a panel of questions and answers.

Every member of N.A.A.F. attending the A.P.E.A. convention and everyone concerned with recreational standards in girls' athletics is cordially invited to this supper party.

8:00 P.M. PAGEANT (Municipal Auditorium)

10:30 P.M. SMOKER for Men Delegates. (Adam Room)

10:30 P.M. TEA for Women Delegates. (Ball Room)

SATURDAY, APRIL 18

BREAKFAST MEETINGS.

7:00-8:30 A.M. New Governing Board, Mr. W. G. Moorhead, presiding.

8:00 A.M. Legislative Board of Women's Athletic Section—place to be announced.

SECTION MEETINGS

8:30-9:45 A.M. **Research Section.** (Adam Room)

Presiding: Dr. Frederick W. Cozens, University of California at Los Angeles.

Symposium: What Should be the Nature of Research in Physical and Health Education?

"Studies Involving the Measurement of Strengths and Skills," Dr. Frederick Rand Rogers, Boston University.

"Physiological Studies," Dr. Arthur H Steinhaus, George Williams College.

"Psychological Studies," Professor Granville B. Johnson, University of Denver.

"Sociological Studies," Dr. Frank S. Lloyd, New York University.

"Survey Studies," Dr. Clifford Brownell, Teachers College, Columbia University.

"Health Education Studies," Dr. Mabel Rugen, University of Michigan.

8:30-9:45 A.M. **Health Education.** (Ball Room)

Presiding: A. W. Thompson, Chairman.

"Social Hygiene and the Modern Program of Health Education," Dr. Jerome Cook, Chairman Committee on Professional Education, Missouri Social Hygiene Association.

"Problem Solving—an Educational Approach to Health Education," Reba F. Harris, Associate Director of Health Education, State Department of Health, Louisville, Kentucky.

Summarizer: Dr. Mabel Rugen, University of Michigan.

10:15 A.M. GENERAL SESSION (Ball Room)

Symposium on Practical Problems in Physical Education, arranged by Teacher Training Section.

"Relation of Physical Education to General Education," Dean T. W. H. Irion, School of Education, University of Missouri.

"Digest of National Study and Proposals by the Teacher Training Section," N. P. Neilson, Stanford University.

"Problems in Teacher Training," J. E. Rogers, National Recreation Association.

"How to Organize a Demonstration," Louis E. Hutto, Public Schools, Des Moines, Iowa.

"Organizing Adults for a Recreational Evening," Jessie Garrison, State Director of Physical Education, Montgomery, Alabama.

12:30 P.M. Showing of film of Russian Physical Education (Adam Room)

LUNCHEON MEETINGS

12:30 P.M. **Delta Psi Kappa Luncheon,** Parlor D, Missouri Athletic Association, $1.00.

12:45 P.M. **Y.W.C.A. Luncheon Meeting.**

Hostess: Louise Fulton, St. Louis Y.W.C.A.

Speaker: A. H. Wyman, Department of Neighborhood Service and Recreation, Community Chests and Councils, St. Louis.

Discussion of program of the coming Y.W.C.A. Convention to be held at Colorado Springs, April 29-May 5, 1936.

1:00 P.M. **Phi Delta Pi Mid-West Province Luncheon.** To be held at the Hotel Jefferson, 12th and Locust Streets, St. Louis.

ANNUAL MEETING OF THE WOMEN'S DIVISION, N.A.A.F.

(Rooms 102, 104)

WEDNESDAY, APRIL 15

General business and program meeting open to all leaders in field of physical education and recreation concerned with the place of girls' athletics and their standards.

9:30-12:30 A.M. Business meeting.

Presiding: Edith M. Gates, chairman executive committee.

Report of Executive Committee on work of the organization for past year; elections; change of constitution; program for future.

Program: "An N.A.A.F. Overview of Recreational Trends"—presenting youth movements of today and the relation of N.A.A.F. to them.

Speakers:

National Youth Administration—Arthur Williams, loaned from National Recreation Association staff to National Youth Administration.

Adult Education—Frank M. Debatin, Dean of University College, Washington University.

Public Recreation Trends—James E. Rogers, National Recreation Association.

Workers Education—to be announced.

Youth Hostels.

Other Groups.

The meeting will break up into small luncheon groups with each speaker as head of a table for further discussion.

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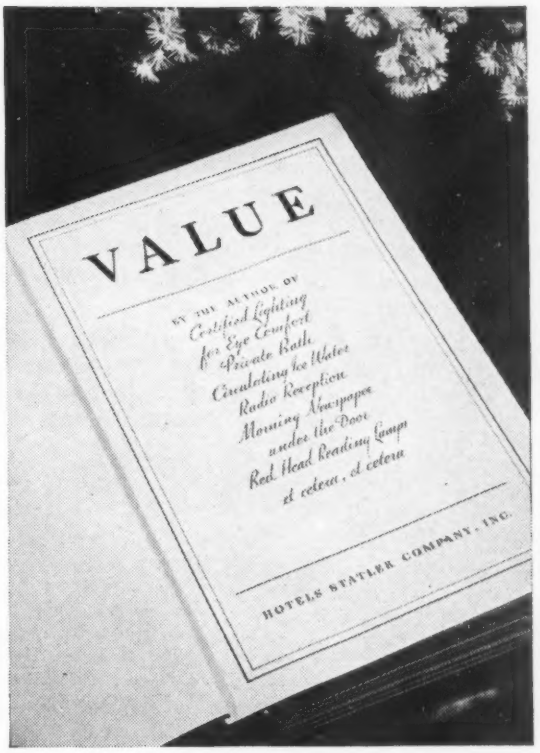

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The Red and Blue Meet

A Mass Demonstration

By

C. PAULINE DAY

Director of Girls' Physical Education,
Peekskill High School, Peekskill, New York

C. Pauline Day

A GIRLS' physical education exhibition can create as much excitement as a high school football game. To many this statement will seem an exaggeration, but if feverishly enthused crowds and gate receipts are any criteria, then it is true in every respect. If such an event can cause an entire student body to divide and align itself with the competing teams, and manifest its choice by displaying the teams' colors in conspicuous places; if it can interest the parents and friends of the competing students to such a degree that they consistently tax the capacity of a huge gymnasium and consider it almost treason to view the spectacle from a seat on the side of the gymnasium reserved for the friends of the opposing team, then the accuracy of such a statement has been completely established. Such an event has been produced annually in the Peekskill High School, and is known as the "Red and Blue Meet."

What is a Red and Blue Meet? It is a mass demonstration participated in by practically every girl in the senior high school, and is staged for the purpose of illustrating the various phases of physical education activities. The development of leadership, discipline, and individual responsibility are among the important values received by the students from this type of activity. It has also proved a valuable source of revenue which is of much aid in meeting the expenses of the other forms of athletics in which the school as a whole participates. An actual meet of this nature will be described in detail in this article.

IN ORGANIZING the girls into the two teams, Reds and Blues, the instructor presenting her inaugural demonstration may encounter some difficulty in dividing her students proportionately. As a usual thing the participants will naturally organize themselves into the two groups, Reds and Blues, but if it appears that they are going to divide unevenly, the director can facilitate matters by dividing the entire group alternately into Reds and Blues. In the years following, the seniors and juniors will remain members of the team for which they were originally selected. The incoming sophomores may be allowed to choose their favorite team, but if too many of them elect to join one group, then the instructor can again use the alternating method in assigning them to their respective teams. However, the idea of allowing each team to bid for the new girls with whose talents they are familiar tends to create a high degree of spirit and excitement.

At the first general meeting of each of the teams, a captain and a cheerleader are elected by the girls. Then the instructor, the two captains, and the cheerleaders, in a joint meeting, arrange the committee lists. The captains name the chairmen, and the chairmen select their assistants. Usually each committee is composed of from three to five girls, with the exception of the Entrance Committee, which should have about ten members. The captains should be instructed to select only the most capable girls for all of the committees, because it is through these groups that the director does most of her work.

The following committees are typical:

Committees	*Members*
1. Entrance Committee	10
2. Costume Committee	3
3. Cheers Committee	5
4. Finance Manager — General Manager and Assistants to be selected	
5. Relay Committee	3
6. Tumbling and Stunts Committee	3
7. Dance Committee	3

The Reds' special number, the "Gay Nineties," a tap dance.

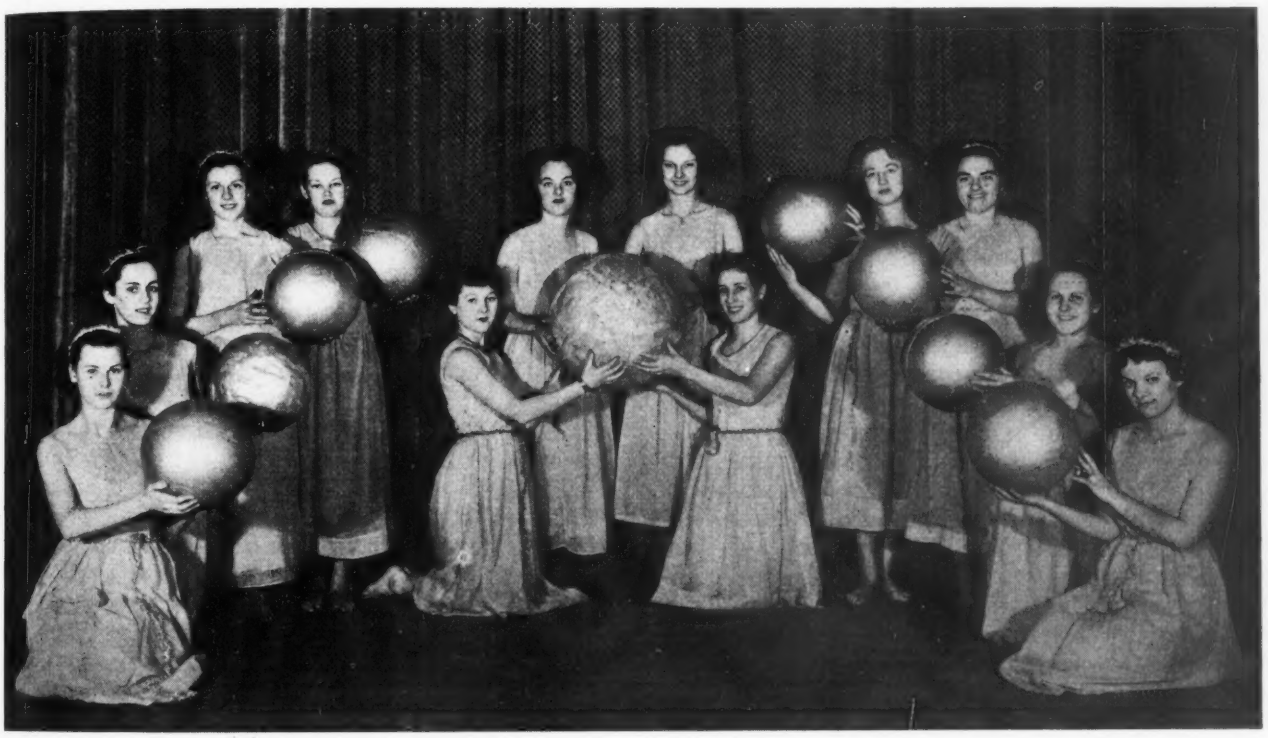
8. Name Committee 3
9. Ad Committee 3
10. Poster Committee 3

Most of the above committees are self-explanatory. The Name Committee is responsible for the arrangement and correct spelling of the names of all the girls competing. The Ad Committee canvasses the merchants in the village for ads for the program. In this way the expense of the programs and tickets is defrayed. The Poster Committee works in collaboration with the art department in creating and presenting the posters.

As to the division of material such as dances, tumbling, stunts, etc., most of which has been learned by the students as a part of their regular class work, the most satisfactory method is to have the chairmen of the various committees choose by lot the names of the events that each team will use, thereby avoiding any possible thought that the instructor may have been partial to one of the groups in assigning it better material.

The outstanding show pieces of the performance are the entrances. Here the teams seek to outdo each other in originality of ideas and costumes, in order to be the first to attract and hold the attention of the audience and judges, and thus win the first points of the contest and the moral edge which necessarily results from a good start in any competitive event. It should be borne in mind that the entire plan cannot be conceived and perfected by the students alone. Their enthusiasm and willingness are somewhat overshadowed by their lack of experience and the instructor will find it necessary to exercise a discreet, though thorough, supervision so that perfection of detail and smoothness of execution may be achieved without destroying the initiative and ambition of the pupils.

The instructor will require the cooperation and assistance of various other departments in the school, such as music, art, manual training, household arts, etc., in the creation of costumes, lighting, orchestrations, and general equipment. The assistance which these groups can render in making the program more spectacular cannot be overestimated. A specific instance of the importance of their aid is found in the lighting arrangements. Since, in most instances, it is necessary to present a program of this nature in the school gymnasium, it is difficult to produce effective lighting. After much experimenting along this line, it has been found that spot lights placed at both ends of the gymnasium at approximately fifteen feet from the floor are the most effective. Since the overhead lights are usually far too bright, these may be dimmed by the expedient of covering them with blue crepe paper.



A group of Blues from the "Silver Ball Dance."

The following is a typical program of such a meet:

Music

1. Entrance: Blues—"Candyland"; Reds—"The Fireflies Ceremonial"
2. Couple Leap Frog
3. Poster Contest
4. Ticket Contest
5. Running Relay
6. Cheers by Reds and Blues.
7. Dances:
   Reds—"In the Gay Nineties," Waltz Tap.
   Blues—"Arithmetic," Buck Tap.
   Reds—"Scarf Dance," Two Ecossaises—Schubert.
   Blues—"Silver Ball Dance," Godowsky Waltz.
8. Basketball Relay.

9. Tumbling and Stunts (Time limit 10 minutes)
10. Sack Relay.
11. Finale.

Experience has shown that in determining the number of points to be credited to each event some consideration should be given to the time and effort required in preparation. Thus some events rate and receive more points than others. In order to balance the credits received in the above outlined program, the events were scored as follows: Events 1, 6, 7, and 9 receive five points for first place and three points for second place. All other events were rated five points for first place. The results of the various contests were determined by a group of three judges, selected from the physical education departments of neighboring schools. In scoring, the events are judged using the following plan:

Entrances—(Possible Score of 20)
1. Originality 5
2. Costuming 5
3. Dances and Drills 5
4. General Effectiveness 5

Dances—(Possible Score of 20)
1. Technique 10
2. Costumes 5
3. Presentation 5

Cheers—(Possible Score of 20)
1. Cheers 10
2. Drills and Formations 5
3. Costumes 5

THE following detailed description of the program will aid the reader in picturing the spectacle as it appeared during its performance.

The orchestra was composed of selected members of the senior high school orchestra and, while awaiting the signal for the entrances, played an appropriate overture. Following this selection, two girls, one to represent each team, who had been chosen because of their appearance and the resonant quality of their voices, dressed in military uniforms in the color of their respective teams, marched to the center of the floor and in unison made the opening remarks concerning the history and purpose of the meet. Then the announcer representing the Blue team heralded its entrance. Immediately following the entrance of the Blues, the Red announcer proclaimed the appearance of her team and the meet was officially under way. It should be noted that this procedure is varied, from year to year, to allow each team the privilege of being the first to enter. At the conclusion of each event the two announcers marched to the center of the floor, and the one representing the winning team for that particular event reported the decision of the judges. These announcements were received with applause interspersed with shouts of derision from the disappointed spectators.

The Blues chose as their entrance piece a skit called "Candyland" and presented it in this very unique manner. In the corner of the gym a girl dressed in appropriate costume portrayed an old worn-out store keeper, standing behind his counter, hawking his wares of candy, pop, chewing gum, etc. The orchestra was playing a currently popular tune, "Jimmy Had a Nickel." Two small

Teacher and her pupils, from the tap dance "Arithmetic."

children selected from the elementary grades appeared, skipping after the fashion of very small children, and bearing between them a huge nickel, made of cardboard and covered with copper-colored paper. The children were attracted by the storekeeper and hastened to spend their nickel for lollypops and peppermint sticks. The kiddies gorged themselves with the goodies and started home. Drowsiness overtook them and they fell asleep by the wayside. As they were falling asleep the music gradually grew slower and softer, and the store keeper, in verse, conveyed to the audience the thought that the next scene would portray the dream of the children.

As the children lay dreaming, a group numbering about sixty appeared, wearing costumes to simulate lollypops. They were led by the captain of the team, impersonating the King of Candyland. They entered four abreast with their bodies swaying to the tune of "The Good Ship Lollypop." They presented a special formal type drill. Having completed their number they formed in two separate groups, one at each end of the gym, and awaited the appearance of the Peppermint Sticks. This group, composed of the same number, headed by the cheerleader symbolizing the Queen of Candyland, entered with the same music and did an informal type of dance, in the process of which they formed two circles, each circle facing the other. The King and Queen stood at regal attention and surveyed their subjects as they frolicked in their festival of fun. As both groups made their exit the King and Queen gently awakened the children and ended their beautiful dream.

The opposing team, the Reds, chose as the theme of their entrance the "Fireflies Ceremonial." To produce the most effective result, the gymnasium was completely darkened and the girls entered two abreast from the two side entrances of the gym. These girls were dressed in their regular gym uniforms with wings made of red cloth bordered with red tinsel attached to their shoulders. Each carried two flashlights, one covered with red crepe paper and the other uncovered. They used a measured slide step to the tune of "The Glow Worm," with left arm extended

(Continued on Page 284)

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II. Principles of Defensive Hygiene

* * *

At last the National Physical Achievement Standards for Girls are available. For three years now Miss Amy Howland and Dr. Frank Lloyd have conducted this careful field study with the cooperation of some three hundred physical education leaders. The study involved some three or four hundred thousand girls. These standards have been formulated at the request and under the sponsorship of the Society of State Directors of Physical and Health Education. A very thorough, scientific job has been done. We have found a great demand on the part of the educational administrators for the boys' standards and we expect a greater demand for the girls' standards because there is very little in this field.

* * *

The Alabama High School Curriculum Commission has placed physical education in the senior high school curriculum on a time requirement basis of four full periods a week.

* * *

Mr. Albert S. Cook, State Superintendent of Schools, writes that the Playground Athletic League of Maryland is carrying on under Mr. H. S. Callowhill as Acting Director, with Mr. Thomas C. Ferguson as State Field Leader.

* * *

At the American Physical Education Association Convention in Pennsylvania, the Pennsylvania State Association voted a very fine tribute to the fifteen years of state service rendered by State Director W. G. Moorhead. They presented him with a life certificate in the American Physical Education Association and also with a very beautiful platinum gold watch of the finest make. This is a very fine recognition and one deserved by Mr. Moorhead. Perhaps we ought to recognize other leaders by giving them that splendid gift, a life membership in our national American Physical Education Association.

* * *

Dr. A. P. Way is now principal of a junior high school in New York City.

* * *

The Physical Education Department of the State Teachers College in Springfield organized a Physical Education Majors Club on October 15. The membership is twenty-seven.

The purpose of the organization is to do research in the field of physical education and to acquaint itself with the physical educators of the past and the present. The club plans to hold two meetings each month, one of which will be floorwork in the gymnasium where the technicalities of the different sports can be studied and methods of teaching folk dances can be learned; the other meeting is to be intellectual in which outside persons in the field of physical education bring to the members new things that are being done in that field.

The organization has adopted a uniform carrying out the school colors of maroon and white.

* * *

California schools have no state championships in either boys' or girls' athletics.

* * *

Lloyd M. Jones of the Department of Physical Education of the University of West Virginia has received his Ph.D. from Teachers College, Columbia University. His thesis, "A Factorial Analysis of Ability in Fundamental Motor Skills" has just been published by the Bureau of Publications of Columbia University.

Three states have over 6,000 teachers in health and physical education. New York, Pennsylvania, and California have over 2,000 each of certified physical education teachers.

* * *

James J. Carter, Director, Lynbrook High School, Lynbrook, New York, has sent in two very interesting items:

"I feel that the following information regarding the South Shore Athletic League is rather unique:

"In our league here on the south shore of Nassau County, we have 10 schools divided into two divisions, *A* and *B*. At the close of our basketball and baseball seasons, we have a league play-off, the proceeds of which are used to promote intramural activities for the member schools. Last year we sponsored golf, and often had more than a hundred students playing intramural golf in the afternoon after school. As our funds increase we hope to sponsor bowling, swimming (we have to rent a pool for this purpose as there are not any public high schools, outside of the city of New York, with swimming pools), and winter sports activities. Our students are classified for physical education purposes, and you will note that physical education is placed first on our report card. It is also the first subject to be scheduled upon entering high school."

* * *

L. R. Burnett, State Director of Physical Education, Baltimore, has published some very fine reports telling about his program in Baltimore.

* * *

The Sargent School is a separate school of Boston University; Ernst Hermann is Dean.

* * *

F. W. Luehring, University of Pennsylvania, is one of the outstanding authorities on swimming and swimming pools. He has perhaps the finest bibliography available on this subject.

* * *

A. S. Barnes & Company has published Volume V of the Interpretations of Physical Education Series entitled *Professional Preparation.*

* * *

Jessie R. Garrison is doing one of the outstanding jobs as State Director in Alabama in the promotion of state-wide programs, especially in the elementary schools. Jessie Garrison is one of our effective state directors.

* * *

Our secretary, Elmer D. Mitchell, has just been appointed Physical Education Consultant on the School Education Committee of the National Congress of Parents and Teachers. The National Congress has been of great help to physical education in local communities and of special help in the development in statewide programs in health and physical education. This is a splendid cooperative relationship we have and Elmer Mitchell has a real opportunity for leadership and service. Mr. Mitchell has also recently been appointed Consultant to the Educational Policies Commission of the N. E. A.

* * *

Helen Manley, University City, Missouri, is doing an outstanding job. Her publications are excellent. Her program is on a sound educational basis. I would vote Miss Manley

(Continued on Page 267)

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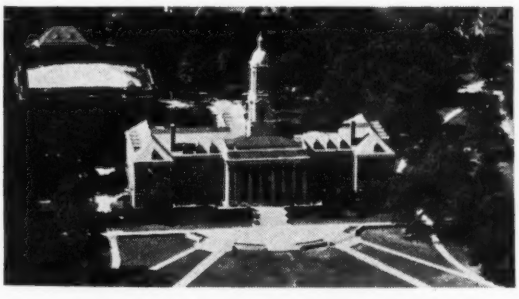

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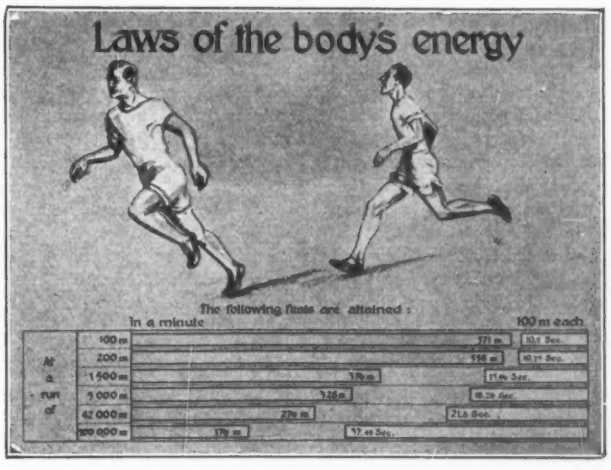

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Eastern District Association News

President—Franklin J. Gray, Springfield, Mass.
Past-President—Jay B. Nash, Ph.D., New York University.
Vice-President—Dr. Hiram A. Jones, Albany, N.Y.
Secretary-Treasurer—Grace E. Jones, Summit, N.J.

CONNECTICUT

Frances Foley

The newly elected officers of the Connecticut Physical Education Association are: President, Marjorie B. Doty, Hartford Public High School, Hartford; Vice-President, Charles C. Wilson, M.D., Supervisor of Health and Physical Education, City Board of Education, Hartford; Secretary, Charles J. Prohaska, M.D., State Department of Education, Hartford; Treasurer, Susan Bill, Hartford.

A broadcast discussing standards in women's athletics prepared by members of the athletic association of the State Normal School in New Haven will be presented over a local station in April.

The Second Annual Farmington Valley Winter Carnival, sponsored by Farmington High School, again proved to be the most colorful and successful winter sports meet to be staged in this section of New England. Over one hundred students representing Farmington Valley schools competed in the Carnival, which for the second time attested to the ever increasing popularity of winter sports in the state. Two ski jumps, a toboggan slide, a skating rink, and a cross country ski course were erected on the scene of the Carnival, located on the Farmington High School grounds. The events included three hockey games, snowshoe races, ski jumping, cross country ski races, skating races, fancy skating, and tobogganing. At six o'clock, "weenies" were roasted over bonfires and lunches were sold in the school cafeteria. In the evening there was dancing in the school gymnasium, in addition to tobogganing and skating on the rink, which was illuminated by large floodlights. Medals were awarded to the first- and second-place winners in all events. The beautiful Carnival Trophy donated by Farmington High School Boosters Club remained in the possession of Farmington High School, the school scoring the most points.

Fannie B. Shaw, School Health Advisor of the National Tuberculosis Association, spent the week of February 9 to 15 in Connecticut. Miss Shaw spoke before teachers' groups in New Haven, Hartford, and Colchester and met the students in training at the Teachers College of Connecticut in New Britain.

MARYLAND

Naomi M. Lantz

More than four thousand girls took part in the Girls' Winter Carnival held in Baltimore on Saturday, March 7. This is an annual event sponsored by the *Baltimore News-Post* and *Sunday American*, and directed by the Playground Athletic League. Girls of all ages took part in the many events which started at 9 A.M. and closed at ten o'clock in the evening. Dodgeball and volleyball are always popular, but fencing, deck tennis, badminton, table tennis, shuffleboard, and clock golf are moving toward a spotlight position in this mammoth meet. The following events completed the program:

Girls under 12 years—Egg and Spoon Race, Round-Arm Dodgeball Throw for Distance, Shuttle Relay, Dodgeball Tournament.

Girls under 14 years—Flag Race, Round-Arm Dodgeball Throw for Distance, All-Up Relay, Dodgeball Tournament, Pinball Tournament.

Girls under 17 years—Block Race, Target Throw, Potato Race Relay, Volleyball Tournament, Dodgeball Tournament, Shuffleboard Tournament.

Girls under 21 years—Bowling, Fieldball Goal Throw, Run and Catch Relay, Basketball Relay, Volleyball Tournament.

Girls 21 years and over—Volleyball Serve for Placement, Shuffleboard, Clock Golf, Volleyball Tournament.

Special Events—Fencing, Bean Bag Tournament, Basketball Foul Shooting, Deck Tennis, Badminton, Table Tennis, Chariot Race.

This annual Winter Carnival serves a good purpose to young and old athletes in all walks of life. Good sportsmanship among the competitors and the untiring efforts of the officials and referees make a perfect combination for a good day of sports.

PENNSYLVANIA

W. G. Moorhead

Two clubs on the campus at West Chester State Teachers College, composed of major health and physical education students, have planned to present demonstrations in gymnastics and dancing. The organization known as the Olympic Club put on a demonstration on March 7 and the women's organization, known as the Valkyrie Club, is putting on a demonstration of the modern dance later in the spring.

On March 21, 1936, the P.I.A.A. held its annual championships in swimming, volleyball, and gymnastics at The Pennsylvania State College. This project has been organized and established in order to promote the various physical activities in the high schools of the state. Elimination tournaments are held in the various districts into which the state is divided, and the winners compete at Penn State for the championship.

Representatives of the School of Physical Education and Athletics have attended the convention of the Southern District of the American Physical Education Association at Knoxville, Tennessee, March 11-14. Two members, Professor E. C. Davis and Director Hugo Bezdek, appeared on the program, presenting papers.

Several members of the staff are planning to attend the annual convention of the American Physical Education Association at St. Louis. Director Bezdek is Chairman of the College Physical Education Section and has organized a very interesting program. Professor Davis will make a report and read a paper on the "Essentials in Teacher Training in Physical Education."

The Pennsylvania Physical Education Society is planning a more effective state organization for the near future. One of the plans under consideration is the district plan with a representative from each district constituting a state council. We have at the opposite ends of the state two large, progressive, functioning areas, namely, the Philadelphia Area in the east, and the Pittsburgh Area in the west. In addition to these two, there are scattered throughout the state numerous small dynamic units, and others more or less remote. The officers of the Pennsylvania State Society are, Frederick Prosch, President; Miss Esther Henderson, Vice-President; Mr. William G. Moorhead, Secretary-Treasurer.

The Health and Physical Education department of Temple University is planning to introduce lacrosse into the curriculum for women in the spring of 1936. The Lacrosse Association has arranged for several English coaches to come to the United States to help spread knowledge and enthusiasm for the game in this country. One of these coaches will be engaged by Temple University during the outdoor season.

News from the Dance Section

Charlotte G. MacEwan

The Dance Club of the University of Chicago assisted the University Opera Association in the production of "Iphigenia in Tauris," by Gluck, on February 8 and 9. The choreography was by Marian Van Tuyl. Members of the men's class in modern dance also participated.

The dance group, in collaboration with the University of

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Chicago Choir, presented a Gregorian Liturgical Service in the University Chapel on Sunday, February 23. This was one of a number of such services which have been presented at the University during the past five years.

The following activities are reported from Ohio:

In Cleveland, a demonstration of dance was given at the John Hay High School on March 16. The program was designed to show briefly and informally the various types of the modern dance as it is being taught in that city. Technique, studies in rhythm and design, and original class compositions were presented by nine schools and organizations. Groups participating were: Modern Dance Club, Thomas Jefferson Junior High School; Modern Dance Class, Collingwood Junior High School; Modern Dance Club, Emerson Junior High School, Lakewood; High School Dance Group, Laurel School for Girls; Modern Dance Group directed by Eleanora Buchla; Dance Chorus, Oberlin College; Modern Dance Class from the School of Education, Western Reserve University; Cleveland Y.W.C.A.; and Experimental Dance Group of the People's Theater. Showing of the dance films made at Ohio University under the direction of Ruth Alexander concluded the program.

Orchesis at Ohio Wesleyan University presented Kreutzberg in a recital on March 19. This group has previously sponsored concerts by Martha Graham and Ted Shawn.

Plans are in progress for a dance symposium for the northwest section of Ohio to be held on April 24 in Bowling Green State University.

Emilie Hartman of Bowling Green University writes: "Since our funds have been limited, the students of dance have been making drums of butter bowls and cheese boxes to add to our collection of percussion instruments. Drum skins and inner tubing for the face, and different size bowls have been used to give variety in tone quality. We have found this a most stimulating as well as interesting unit to carry on with the dance in studying rhythm, design, and music.

"The dancing group is working on Greek dances in geometrical patterns which they will present in the Latin program given by the University and High School Latin Groups."

Two items come from Massachusetts:

Students of modern dance at Mount Holyoke College presented their annual recital at Chapin Auditorium on March 5, under the direction of Marie Heghinian. Among other compositions were a carnival theme comprising dances of contrasting moods, a tribal ritual, and three dances based on a medieval theme, "The Martyrdom of St. Andrew."

The Dance Project organized by Paul Love will be presented at Alumnae Hall, Wellesley College, on April 9. The techniques of Martha Graham, Doris Humphrey, and Charles Weidman will be demonstrated by Lillian Shapero, Letitia Ide, and José Limon respectively. Paul Love will carry the verbal explanation throughout the demonstration, and Genevieve Petit will serve as accompanist for the dancers. Six dances will show the use of the techniques in composition.

Eleanor Struppa and the Dance Group of Randolph-Macon Woman's College appeared in a recital on March 14, at Smith Memorial Building. The dances included, among others, "Negro Revival," with solo and choral singing, and "Abstraction in Archaic Modes: Ionic, Doric, Attic."

At the Municipal University of Omaha, the Orchesis group presented an interesting program of dance compositions on December 18, under the direction of Ruth Diamond and Mrs. Harriet Benson. The accompaniment for several of the numbers was composed by the pianist, Betty Fellman.

Margaret Jewell of San Jose Teachers College contributes the following items from California:

The concert given by Miss Tina Flade at Mills College on November 8 was well received by an enthusiastic audience.

Orchesis at San Jose State Teachers College presented its fourth annual production of "The Juggler of Notre Dame" on December 11 and 13. Although the legend is old, the personnel and structure are always new and each year's group can enjoy the traditional dance drama with fresh spontaneity.

Mid-West District Association News

President—Helen N. Smith, University of Cincinnati.
Vice-President—J. H. McCulloch, Ypsilanti, Michigan.
Secretary-Treasurer—W. K. Streit, Cincinnati, Ohio.

INDIANA

A. L. Strum

The new regulation of the Indiana High School Athletic Association which prohibits high school teams from playing more than two games a day in tournament play is being tried for the first time. The scheme for the state tournament provides for sixty-four sectional, sixteen regional, four extra-regional, and one final consisting of four teams, which is in contrast to the previous plan which called for sixteen teams engaging in a two-day session with the winner playing three games the final day. The Wabash Valley High School Association, which has over a hundred teams in its organization, held a very successful tournament, with the finals at the Indiana State Teachers College Gymnasium, at Terre Haute, under a different plan. The quarter-finals for this sixteen team tournament were held Friday evening instead of Saturday morning. Eight teams thus played two games on Friday, and the semi-finals and finals were played Saturday afternoon and evening. The plan proved popular according to all reports.

MICHIGAN

Mabel E. Rugen

The Twelfth Annual Basketball Rules Meeting, held in Ann Arbor December 7, was attended by more than six hundred officials and coaches. A demonstration of offensive and defensive plays was given by Harve Freeman and squad of St. Augustine High School, Kalamazoo, and Arthur Carty and squad of Northwestern High School, Detroit. This was followed by a general discussion conducted by F. C. Cappon. Lloyd Olds presented an account of his experience as managing coach of the American Touring Track Squad that visited the Scandinavian countries last summer.

Activities of the Women's Athletic Section of the A.P.E.A. are being felt in Michigan through the excellent work of the Women's Basketball Committee. Virginia Peaseley, University of Michigan, is the new State Chairman. An increasing number of women are qualifying as rated officials. A worth-while meeting was held in Lansing on January 18. At this time the following women qualified: Dorothy Kerth of Lansing, Dorothy Van Fleet of Detroit, and Virginia Peaseley of Ann Arbor.

Speedball has been adopted in Oakland County as the official fall sport for boys in the Ten Grade School Association. This association includes nine and ten grade schools in Auburn Heights, Big Beaver, Donelson, Drayton Plains, Dublin and Waterford. It has been reported that 90 per cent of the boys in grades 7, 8, 9, and 10 in the Big Beaver schools participated in the sport, and 75 per cent of the high school boys in Waterford. P. O. Johnson is the instructor at Big Beaver, and Howard Burt at Waterford. Speedball, soccer, and fieldball are recognized as suitable games for junior and senior high school girls as well. Jeannette Saurborn of University High School, Ann Arbor, is the State Chairman for the Women's Athletic Section of the A.P.E.A. in these sports.

Over a hundred E.R.A. County recreational directors met in Ann Arbor January 6–18 for a leadership institute. Roy Murray of the National Recreation Association was one of the principal instructors for the course. The institute was arranged by W. C. Averill, Supervisor of Recreation of the E.R.A.

A number of individuals from the state teachers colleges have expressed their willingness to cooperate in a Speakers Bureau Service, sponsored by the Michigan Physical Education Association in cooperation with the A.P.E.A. Those who have volunteered their services so far include: Thomas Aycock of Michigan State College; Mrs. Ivaclare Howland and Agnes Anderson of Battle Creek College; Isabel Crane, Doris Hussey, Mildred Stephen, and Crystal Worner of Western State Teachers College; Dr. Frank Oktavec, Dr. Irwin W. Sander, and Ruth Murray of Wayne University; and Elmer Mitchell, Dr. Margaret Bell, Dr. Jackson Sharman, and Dr. Mabel Rugen of the University of Michigan. Very likely there are many others who are willing to cooperate in this project.

The Michigan Physical Education Association has been invited to membership in the Joint Committee on Public Health Education, an organization which is attempting to coordinate the various health interests in the State.

Petoskey and Grayling have been popular week-end resorts for lovers of outdoor winter sports. The usual winter festival was held in Petoskey February 7–15. And there was plenty of snow!

OHIO

D. Oberteuffer

West Liberty in Logan County, under the leadership of P. C. Bechtel and the local and county superintendents, has one of the outstanding physical and health education programs in the state. Last fall the entire county united on the development of a broad interscholastic athletic program involving many different kinds of activities. Outstanding, however, is their work in health education. Bechtel has organized pupil guide sheets, one of which was published in the February issue of *Hygeia*. This course of study is in action and is reported to be exceedingly helpful. The next step is to unite the efforts of the county health nurse and the local physician in establishing similar work sheets on community hygiene.

Through the efforts of State Superintendent E. L. Bowsher, it may come to pass that Ohio will again have a full-time state supervisor for the physical education programs. Since the withdrawal of Dr. D. Oberteuffer of The Ohio State University from his capacity of Acting Supervisor, the State Superintendent has been trying actively to put the program back on a full-time basis. President W. K. Streit of the State Association is leading a group of people in advising with Mr. Bowsher as to ways and means of bringing this to pass.

The Social Securities Act has focused the attention of Ohio on the need for the certification of school nurses. A committee of persons from the state departments of education and health and the State University is at work now to formulate plans for such certification.

For many years under the former equalization plan for financing schools through state funds, physical education teachers were placed in three Ohio counties and the program carried on by state funds at no expense to the county. Under the new Foundation Program, it is reported by Dr. D. H. Sutton, Supervisor of the Division of School Finances, that "circuit rider teachers of physical and health education may be continued under exactly the same procedure as they were when the old law was in operation. In other words, a teacher who serves, for example, three separate schools may have one-third of his salary paid by each board of education." The money for his salary comes directly to the school boards from the Foundation Programs as administered by the State Department.

Superintendent F. R. Harris of Greenfield, Ohio, has organized and is carrying on one of the outstanding programs for high schools in that part of the state. He has published several bulletins, which we understand are available in limited numbers, on the Intramural Program, Girls' Athletic Program, and Health Instruction Work.

Ashland County has a professional unit which may well be a stimulant for similar local groups. The Ashland County Physical Education Association has four meetings a year with an average attendance of fifteen. This includes teachers from Ashland College, city schools, and county schools. The programs consist of talks and open discussions in the first three meetings, and a dinner program with a guest speaker for the final session. There is a fine professional spirit in this group.

Around the Country with J. E. Rogers

(*Continued from Page 262*)

one of our outstanding local women executives in physical education.

* * *

John E. Davis, Perry Point, Maryland, is certainly doing a marvelous piece of work in the field of recreation and mental hygiene. He sends the following note:

"It is the custom each year to present a program for the purpose of giving suitable recognition to the many patients who have made commendable progress in a highly diversified program of physical education. Hundreds of patients participate in baseball, softball, volleyball and bowling leagues as well as tournaments in tennis, golf, codeball, handball, croquet. Many others take part in swimming, calisthenics, and gymnastics. Medals and certificates of accomplishment are awarded those who attain the highest averages. Play is thus an important avenue of treatment enabling the patient to get more out of life, to realize his own capacity and gain greater confidence to take up again the responsibilities of civil life. The aim is to fit this program into a balanced therapeutic regimen of work, rest and recreation."

* * *

C. D. Giauque, formerly of Boston University, now Director of Physical Education at George Williams College, reports a very fine interest, increased enrollment, and much progress.

* * *

Perhaps one of the most outstanding reports in regard to physical education and athletics is the "Report of the Committee on Physical Education and Athletics," reprinted from the *North Central Association Quarterly* for June, 1933. Certainly the people in the mid-west and members of the Northwest Association should read this very important contribution. This report, made by the outstanding educators of our middle west states, is one of the most intensive studies ever made by educational authorities.

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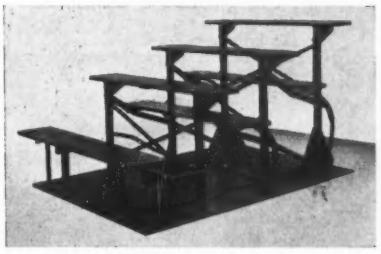

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Central District Association News

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President-Elect—Edna McCullough, Emporia, Kansas.
Vice-President—Ermina Tucker, Minneapolis, Minnesota.
Secretary-Treasurer—Alfred O. Anderson, Kansas City, Missouri.

COLORADO

Elizabeth C. Forbes

Mid-winter demonstrations, exhibitions, intramurals, and tournaments are at their height throughout the state. At the Colorado State College of Education, the Dolphin Club under the direction of Helen Springer put on a Swimming Carnival February 5, 6, 7. These annual carnivals have become most popular and some excellent demonstrations of swimming and diving are presented.

IOWA

Hugo Otopalik

The Physical Education Bureau of the Des Moines Public Schools conducts an "All-Sports" tournament in their indoor activities each year which has proven to be a great stimulus in the development of the program. Certain standards are set up by which children can accumulate points through increase in skill or performance in a variety of activities. These activities include free stunts, tumbling, pyramids, individual rope, mass games, balance beam, stall bar, horizontal bar, dancing, combat activities, and sport skills. The maximum number of points possible is 100. Any child who accomplishes 80 per cent of this attainment is given an "All-Sports" rating which is recorded for the school and for the city. Practically all of the accomplishments can be mastered by any normal child who is willing to work hard enough. From 75 to 90 per cent of the children in each school manage to achieve this rating each winter. As a result, the elementary school program has improved very rapidly each year since this plan was developed.

KANSAS

L. P. Dittemore

The annual State Convention of Physical Directors will be held at the Allis Hotel, Wichita, on the evening of March 27 and all day March 28. The first general session will be at 8:00 P.M., and the principal address will be given by Dr. C. H. McCloy of Iowa University on the subject, "The Next Ten Years in Physical Education." His address will be followed by a social period in the ballroom of the hotel. Department meetings for men and women will convene at nine o'clock the next morning. The programs will consist of talks and discussions of live topics in physical education and health. The second general session will be at 10:45 A.M. and will be addressed by Mabel Lee of Nebraska University on the subject of "Coeducational Physical Education." The annual convention luncheon will be held at 12:30 P.M. and will be in honor of Mr. L. P. Washburn, first President of the State Association. At 2:00 P.M., the round table groups of public school directors, coaches, Y.M.C.A. directors, and health directors will meet to discuss their problems. At 3:00 P.M., the last general session will be held, at which the new officers of the Association will be presented. The session will be addressed by a coach or athletic director of national note. This speaker is being provided by the Kansas State High School Athletic Association.

MISSOURI

Marion Bernard

From the State Teachers' College at Kirksville, Frances Fuller reports that the Women's Department has sponsored a series of social dances attended by 170 men and women. The W.A.A., in addition to the regular tennis and volleyball intramurals, has entered upon a rather extensive tour of hiking which includes day hikes and two week-end cabin hikes. The new physical director, Dr. George Welles, who is an archery enthusiast, is directing a group in archery.

NEBRASKA

Clara I. Rausch

A peace pageant, "The World's Children," was presented at Christmas by 350 Falls City children. Authentic folk games and dances, as well as stories and songs of thirteen countries, were presented to an audience of 1,300.

The schools of the "Little Ten" of Richardson County presented an interesting playday at Humboldt December 7. Color teams of over fifty girls, representing nine schools, participated in mass games, folk, "old-time," and tap dancing, elementary tumbling, and a demonstration lesson in fundamental gymnastics.

OKLAHOMA

Mary Kate Miller

The State Physical Education Association met in Oklahoma City Friday, February 7, with Dr. David Brace, University of Texas, as the principal speaker. All officers were re-elected: Flora Mae Ellis, Oklahoma A. and M. College, President; Grady Skillern, Director of Physical Education for Boys, Tulsa, Vice-President; Katherine Ross, Columbus School, Secretary-Treasurer; Ruth Irwin, Christian Research Section, Jackson Junior High School, Oklahoma City.

The Association voted to return to the Southern District, that the President represent the state at the council meeting, and that yearly dues of fifty cents be paid.

Flora Mae Ellis and Valeria Cobin, of Oklahoma A. and M., plan on attending both the Southern District Convention and National Convention at St. Louis.

Ima James of Oklahoma University, says that she is taking her entire staff to the National Convention at St. Louis.

Helen C. Corrubia will give a paper on her corrective program at the Tulsa High School at the Research Section of the Southern District.

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Southern District Association News

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Vice-President—Fannie B. Shaw, University of Florida, Gainesville.
Secretary—Romayne Berryman, Mississippi State College for Women, Columbus.
Treasurer—Bennie Strickland, Austin, Texas.

Aldace Fitzwater

ALABAMA

The Southern Touring Team of the United States Field Hockey Association spent five days in February at Judson College and Alabama College. The fourteen players coached and played with and against the hockey players in these colleges. Visitors, both faculty and students, from Agnes Scott College, University of Alabama, Howard College, Judson College, Alabama Polytechnical Institute, and Phillips High School in Birmingham witnessed the game on Saturday at Alabama College, and were coached by the players in the afternoon. Hockey is not played extensively in the "deep South," but the game should gain a great impetus from the visit of the touring team and the excellent help given by the coaches.

The Women's Athletic Association of the University of Alabama is sponsoring a dance program by Ted Shawn on April 21.

The Alabama State Women's Athletic Association will meet at Judson College on May 8 and 9.

Girls in the high schools throughout the state are busily checking points and making out applications in preparation for the State Playday to be held early in April at Alabama College. This is a red-letter day, and every girl's ambition is to go to Montevallo to Playday.

Gulf Park College is very proud of its new swimming pool. It is an outdoor pool enclosed on three sides with a nine-foot transparent glass wall (the fourth side is dressing-room); it can be used all year round. It is regulation size for races, and has one-meter and three-meter diving boards, and is lighted by powerful floodlights for use at night. It was initiated by the Athletic Association with a swimming party for its new members.

FLORIDA

At the annual meeting of the Florida Health and Physical Education Association, held in Orlando during the early part of January, the following officers were elected for the coming year: Hollis Westfall, Gainesville, Chairman; Mrs. Gertrude Hiatt, Miami, Vice-chairman; Hobart Hooser, Lake City, Secretary; and George Beck, Marianna, Treasurer. An interesting program was provided, and many problems were discussed during the round table meeting immediately following the afternoon meeting. E. Benton Salt of the University of Florida, who has been conducting a survey of health superstitions and misconceptions that prevail among children of the secondary schools in the state of Florida, gave us a short report of his findings up to the present time.

The Association is still hopeful that physical education will soon be reinstated as a required subject throughout the entire state.

The University of Tampa is entering into the teacher-training field of health and physical education. A complete program for teachers will be completed within the near future. A women's athletic association has just recently been organized. Mr. M. K. Adams, director of the intramural program, has been instrumental in organizing the association.

GEORGIA

The American Field Hockey Touring Team, composed mainly of all-star American field hockey players, visited the University of Georgia at Athens from February 16 to 19. The team gave demonstrations of playing and coaching techniques, and discussed the details of efficient umpiring and refereeing. The conference was

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attended by a large representation of students and faculty members from colleges all over Georgia. It was the first time that such a team had visited the South, and it is hoped that its visit will prove to be a stimulus to development of hockey throughout this region.

MISSISSIPPI

The Clarksdale High School has 177 girls enrolled in swimming. Twelve girls earned their Junior Red Cross Life Saving emblems. Sylvia Howell, a graduate of Mississippi State College for Women, is the new physical education teacher in charge of junior high school work at Clarksdale. Evelyn Baird sends word that each student of Clarksdale High School has had a physical examination this year.

SOUTH CAROLINA

Due to the fact that the date of the South Carolina Education Association meeting conflicted with that of the Southern District meeting at Knoxville, the regular spring meeting of the S.C.P.E.A. is to be postponed until April. As a section meeting of the S.C.E.A., the discussion is being planned under the direction of Mrs. S. M. Burts of Spartanburg, with the topic of "Recreation Problems in the School and Community."

The executive committee of the State Association met in Columbia, January 19. At this time plans were made for an exhibit for the meeting of the South Carolina Education Association, and for a program of publicity for the Physical Education Association. The latter includes a series of radio broadcasts, and feature articles for various newspapers in the state.

Among the physical education teachers new in the state this year are Mary Lowndes Barron, Converse College; Susie Hammack, Winthrop College; Jeannette Samuels, Anderson Junior College; and Don McCallister, University of South Carolina.

TENNESSEE

At the Christenberry Junior High School of Knoxville, Kenneth Perry is having marked success with his seventh and eighth grade boys in boxing. Strict supervision and safety measures are maintained. The boys box two minutes at a time. They have evidenced a great amount of enthusiasm. Mr. Perry hopes soon to have a boxing club, as he has a wrestling club, a tumbling club, and a swimming club. There is no pool at the school, but the swimming is handled through an arrangement with the local Y.M.C.A. Battleball is among the most popular sports of the Knoxville schools. All elementary and junior high schools have intramural teams in this sport.

At the University of Tennessee, Godfrey Novotny started his second class of the year in ballroom dancing. Because of the large number formerly interested, it is necessary to limit the class to the 150 men and women who register for the course. It has also become necessary to require a deposit fee of $1.00, to insure attendance regularly. Those who attend at least eight of the ten lessons will have their $1.00 refunded at the end of the ten-week course.

This winter has seen the beginning of a study group in Knoxville on the subject of the modern dance. Margaret Carroll, who has done quite a bit of study along this line, was responsible for the organization of the group, and served as the instructor. Members are teachers of physical education in the University of Tennessee and in the city schools, with a few interested classroom teachers of the city. The group comprises about twenty regular members. Besides the value of the study being made, the group has been the means of creating a wider feeling of goodfellowship among the teachers of Knoxville. It is proving a most enjoyable project, as well as being educationally beneficial.

Realizing the need for closer fellowship and deeper professional spirit between the men and the women students in physical education at the University of Tennessee, the Phi Eta Tau Club recently entertained the men students at a most successful cabin party. Phi Eta Tau is the local professional club for women majoring in physical education at the University. The cabin party proved such a success that a steak-fry is being planned for the near future.

It May Interest You to Know---

THE Women's Athletic Section is pioneering again, this time with a series of six radio broadcasts over station WEEI, Boston. The series started March 21, and will continue for the five succeeding Saturdays, coming on the air from 10:00 to 10:15 A.M. Miss Louise Kingman of the State Teachers College at Framingham, Massachusetts, is directing the programs. This program is but one of the many services offered the profession by the Women's Athletic Section through its active committees.

* * *

"THE Relation of the Home to Character Formation" will be the theme of the Fortieth Annual Convention of the National Congress of Parents and Teachers, to be held in Milwaukee, May 11-15.

* * *

THE Amateur Athletic Union has taken a sincere and firm stand for the protection of the youth of the country against misleading advertisements concerning the use of alcohol and smoking by prominent athletes. Professional athletes are being urged to desist from endorsing these products, because of the effect their statements will have upon young athletes.

* * *

AT THE meeting of the Physical Education Section of the Eastern States Association of Professional Schools for Teachers, Dr. Herbert J. Stack will speak on "The Place of Safety Education in the Health and Physical Education Program." A panel discussion on "Physical Education Preparation in our Teacher Training Institutions for Personal and Community Service," will be led by Marianna G. Packer. Mildred Nelson is Chairman of this Section, which meets in New York April 4.

* * *

THE Rules and Editorial Committee of the Women's Athletic Section of the A.P.E.A. announces the publication of a new number in its series of Guides: *The Individual Sports Guide,* including material on archery, golf, and tennis. These sports have previously been included in the *Women's Athletic Handbook.*

* * *

MAGAZINE articles of interest to our readers in the current magazines include the following:

Archery Review, March—"Exterior and Interior Ballistics of Bows and Arrows," W. J. Rheingans.

Athletic Journal, March—"Ground Strokes in Tennis," P. Bennett; "The Shot Put and Discus Throw," J. P. Nicholson.

B. C. Teacher, February—"Some Suggestions for Physical Education in Rural Schools," S. O. Harries.

Camping, March—"A Summary Study of Counselor Training," W. L. Stone.

Catholic School Journal, March (Special School Health Number)—"Ideals in Athletics," Sister V. Kelly.

Education Digest, March—"Physical Education's Greatest Need," W. R. LaPorte.

Health, April—"Why 'Sudden Death?' " B. L. Colver.

Hygeia, March—"Preventable Deformities," G. D. Hough, Jr.

Journal of Social Hygiene, January—"Conference on Education for Marriage and Family Social Relations."

Magazine Digest, March—"In Defense of the Fat Man," L. H. Robbins.

Leisure, March—"Winning at Table Tennis," A. L. Davis; "Council Fires and Friendship," H. A. Sleeper.

News-Bulletin (Texas State Health and Physical Education Association), February—"Can Physical Education and Athletic Coaching Be Successfully Combined in Teaching?" B. Strickland.

Safety Education, March—"What the Junior Safety Council Means to Our School," R. Deutsch.

School Government and Education Review, February—"Health of the School Child," Dr. MacNalty.

Sportswoman, February—"Backyard Sports," J. H. Post.

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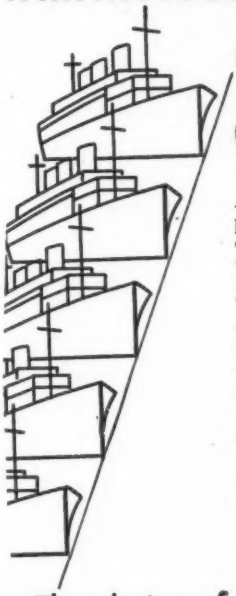

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Water Sports News

(*Continued from Page 241*)

Sports Week. Such a program offers events in which all types of swimmers can participate with enjoyment.

District Water Sports Committees

Water sports committees have been organized in each of the American Physical Education Association districts. Each committee is composed of members of the National Water Sports Committee in the district, state chairmen, and any leaders in the field from the district not already included. The district chairmen are assisting the various chairmen of the Women's Athletic Section in arranging the water sports programs of the District Conventions.

The Southern District has had, for several years, a well organized water sports committee under the leadership of Miss Frances A. Greenwood. This committee has a long list of achievements to its credit, among which are:

1. Publication of *Swimming, Diving, and Water Sports; a Bibliography, and Guide to Equipment and Supplies* by Miss Frances A. Greenwood, which lists nearly six hundred books, articles, and papers, and approximately five hundred firms furnishing equipment for pools and water fronts.
2. A reference library of the available books, articles, papers, and catalogues listed in the bibliography.
3. A permanent educational swimming exhibit composed of items of equipment and supplies.
4. A compilation of the swimming pools and facilities in the South.
5. An annual Water Sports Conference.

The Water Sports Conference offers a unique educational opportunity to the swimming instructors of the South. It was inaugurated in March, 1935 at the University of Alabama. Those invited included camp counsellors, recreation leaders, Y.M.C.A. and Y.W.C.A. women swimming directors, and instructors in public and private schools, colleges, and universities. The conference extended over a period of three days and was characterized by pool-side meetings, with delegates in swimming suits giving demonstrations and participating in discussions; round table meetings; papers on phases of water sports of current interest; motion pictures; and breakfast, lunch, and dinner gatherings of purely social nature. It is planned that the Conference will be an annual affair, the various colleges and universities acting as hostess in rotation.

Two related problems were attacked at the Southern District Water Sports Conference—the standardization of swimming techniques, and the rating of swimming officials. The Boston Board of Officials Swimming Rating Scheme was used as a basis from which to work. The standards and tests are now in the hands of several of the swimming instructors who attended the Conference, and are being used and tested. From suggestions and criticisms made they will be revised to be used in rating officials at the next conference. Those receiving satisfactory ratings will be authorized to give the tests in their local communities.

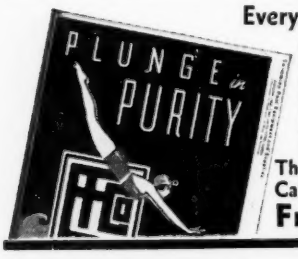
Motion Pictures

The list of available motion picture films on water sports activities is growing. The motion picture, "Swimming," produced jointly by the Women's Athletic Section and the Water Sports Committee, is now ready for distribution. It is composed of three reels picturing the crawl, back, and breast strokes. It is planned that an additional reel will be made this year. The film, "Stunt Swimming and Diving," taken at the University of Illinois last spring, is unique in that it pictures figure swimming, water formations, stunt diving, fancy diving, and double diving from high and low boards.

Water Sports Committee Projects

In 1935 the Research Committee of the Women's Athletic Section sponsored the compilation of annotated bibliographies on the various sports covering both books and articles published since 1925. Miss Ernestine Troemel, of Morehead State Teachers College, Kentucky, is in charge of annotating the books and articles on water sports published this year, thus keeping the portion of the bibliography on aquatics up to date.

Miss Frances A. Greenwood, Librarian of the Water Sports Committee, is continuing her work of collecting copies of the books, articles, papers, and pamphlets pertaining to water sports, which are listed in her extensive bibliography. Her collection is being housed in the University of Alabama library.



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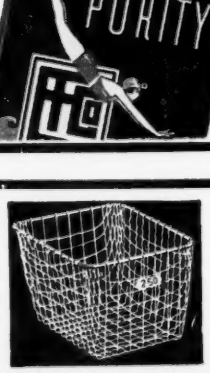

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The progress of swimming in other countries is being studied by Miss Ruby J. Cline, of the University of Missouri, in her trip around the world, which includes attendance at the Olympic Games in Germany.

Miss Ann Avery Smith is in charge of the swimming records. The events in which records can be made include several additions this year and are as follows:

75-Foot Pools	60-Foot Pools
1. 40-yard free style	1. 40-yard free style
2. 50-yard free style	2. 60-yard free style
3. 100-yard free style	3. 100-yard free style
4. 220-yard free style	4. 220-yard free style
5. 40-yard back	5. 40-yard back
6. 50-yard back	6. 60-yard back
7. 100-yard back	7. 100-yard back
8. 40-yard breast	8. 40-yard breast
9. 50-yard breast	9. 60-yard breast
10. 100-yard breast	10. 100-yard breast
11. 100-yard free style relay (4 swimmers)	11. 80-yard free style relay (4 swimmers)
12. 75-yard medley relay (3 swimmers)	12. 60-yard medley relay (3 swimmers)

Water Sports Committee List

It is the desire of the Water Sports Committee to be genuinely helpful in the fostering of water sports activities throughout the country. Those in charge of aquatic activities for women and girls are urged to communicate their problems to members of the Committee, and also to send in suggestions, criticisms, and comments which would assist in the compilation of the annual Guide.

The 1935-36 Committee list is as follows:

Eastern District

Ethel McGary, Chairman, Assistant Director of Life Saving Service, ARC; 315 Lexington Avenue, New York City.

H. Margaret Lea, Department of Physical Education, George Washington University, Washington, D.C.

Olive McCormick, Waterfront Adviser, Girl Scouts of America; 570 Lexington Avenue, New York City.

Ann Avery Smith, National Chairman, Formerly of the Department of Physical Education, University of Illinois; 301 Whittier Hall, Columbia University, New York City.

Kathryn W. Swain, Director of Swimming, Central Branch, Y.W.C.A.; 30 Third Avenue, Brooklyn, New York.

Southern District

Frances A. Greenwood, Chairman; Department of Physical Education, University of Alabama.

Ernestine Troemel, Director of Physical Education, Morehead State Teacher's College, Morehead, Kentucky.

Mid-West District

Mrs. Mary E. Derosier, Chairman, Department of Recreation, Detroit, Michigan; 504 Elmwood Avenue.

Alice Bonar, Waukegan High School, Waukegan, Illinois.

Grace B. Daviess, Department of Physical Education, University of Cincinnati.

Central District

Marjorie M. Mayer, Chairman, Department of Physical Education, Colorado Agricultural College.

Ruby J. Cline, Department of Physical Education, University of Missouri.

Alice Sherbon, Department of Physical Education, State University of Iowa.

Northwest District

Harriet F. Glover, Chairman, Department of Physical Edu-

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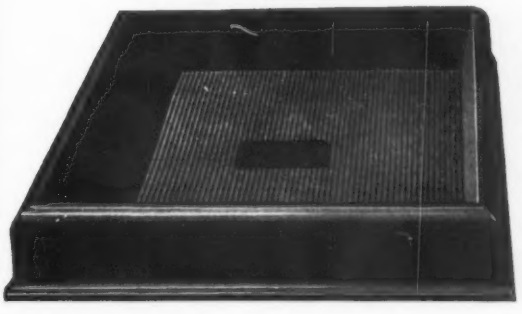

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cation, University of Washington, Seattle, Washington.

Southwest District

Mrs. Marion S. Mattern, Chairman, Department of Physical Education, University of California at Los Angeles.

Teaching Beginners to Swim

(*Continued from Page 244*)

and the instructor wishes to establish the individual student's dominating stroke or strokes, a week of distance orientation is given. Each student in the class is required to swim his greatest distance on the first attempt, using one or all of the strokes he has learned. The following period he is asked to increase this distance. He must improve every day. If it is only one yard more than the day before it is an improvement. His goal or objective by the end of the week should be at least from fifteen to twenty minutes of continuous swimming or from one hundred to five hundred yards. The student will, therefore, naturally select the stroke easiest for him to use for distance.

In the University of Iowa Summer Session courses for the past four summers were included male students ranging in age from 17 to 55 years, the average being about 30 years. This proposed course of instruction was developed in these summer session groups. At the end of the course, covering a period of from five to six weeks of daily sessions, every student was able to swim from one-fourth to one-half mile, and some could swim even farther than this. In tabulating the various strokes used by each member of the class, and the distance covered with each stroke, we found an excellent sampling of all of the skilled strokes. The most prevailing stroke was the side stroke. Others, in order of frequency, were crawl, back, and breast strokes. The breast stroke was used least. By dominating stroke is meant the stroke the student uses longest, or most often, or for the greatest distance with the least amount of fatigue.

Advantages of Skill in Swimming

If such a method of instruction is taught in any educational system, it will eliminate the intermediate groups of classes, since the objective of the course is to "ground" the beginner in all of the skilled strokes. If he is able to swim all strokes fairly well and one or two strokes particularly well, the student is prepared and qualified for the advanced branches of swimming, namely, advanced technique in strokes, competition in squad and team as well as diving, life saving, intramural competition, and informal games. It is safe to say that the average student taking beginning swimming will not develop it farther than the beginning class work in so far as class instruction is concerned. Instructors should therefore adopt such an all-stroke beginning system and extend the course over a longer period of time, so that upon completion of the course the student is well-equipped to take care of himself in water. He should be able to meet almost any situation, even that of swimming for another. The practical and utilitarian purposes of each stroke, such as life-saving carries, etc., are demonstrated by the instructor as well as practiced by the student throughout the course. Further, should a student desire to advance his ability in any of the various branches listed above, his advancement and improvement is very rapid because of a sound and basic beginning course in all the strokes.

Being able to swim distances of some degree without tiring too quickly is considered the most important factor in the beginning course because of the utility and the self-preservation element. By learning to swim long distances in the beginning course, the student cultivates respect for and an appreciation of distance over water, as well as learning to govern his speed at the start accordingly. Then too, the student who covers his first long-distance swim has the pleasant experience of a self-satisfied feeling. It is an accomplishment heretofore unconquered. He derives an assurance and confidence unknown to him before. It will create, stimulate, and motivate a desire to continue this pleasant form of recreation. Such a course then is sufficient for the average student throughout life. It is now self-motivating.

After the student has been practicing this distance program work, he experiences the new and pleasant sensation that it becomes easier for him every day he swims. The reason is that he begins to give himself over to the water. In other words, he begins to relax completely in his strokes, his breathing becomes natural, he has a greater freedom of action which is smooth and rhyth-

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mical. Jerky and struggling movements disappear. As this relaxation appears in the strokes, fatigue noticeably decreases, because now the blood stream can wash the waste product from the relaxed muscles and can carry food and oxygen to them better when they are not under a state of tension. A rigid muscle squeezes the blood out of it thus eliminating food from the "oxygen-hungry" muscles, and the result is fatigue.

Reactions from many students have been to the effect that once they were beyond approximately three-hundred yards, they swam much easier and felt as though they could continue almost indefinitely. Many of those who stopped at the quarter-mile and even those at the half-mile remarked that they could have continued on much farther. This would tend to bear out the statement the writer has often made from observations that if one can swim a quarter-mile one can swim almost any distance as occasion demands. When asked where the hardest part of the swim occurred, the general answers were from 100 to 250 yards. That is usually where the so-called "hump" occurs, hence, the instructor must encourage the student to get over and beyond it, and he will be rewarded if he gives it a fair trial.

It is the writer's belief that man's greatest accomplishment after having learned to swim is to be able to govern his pace in swimming over various distances, no matter how short or long. While swimming these distances, his senses become trained unconsciously to a sound respect for and appreciation of any distance over water just as he has consciously or unconsciously learned to do in walking over land. There is a walking speed in water which can be found by swimming distance daily.

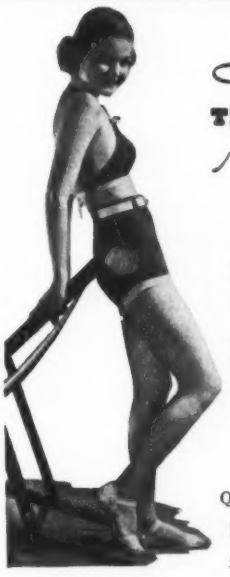
The ultimate objective then, of this method of orientation in beginning swimming is to make man distance-conscious through a dominating stroke or strokes.

Following this idea to its logical conclusion, it is safe to say that man is not a "swimmer" until he can swim at least one-quarter mile. This then would appear to be the dividing line between a beginner and a skilled swimmer. A quarter-mile or from fifteen to twenty minutes of swimming should be a standardized beginning swimming test.

Keeping the Baseball Squad Active

(*Continued from Page 249*)

certain bases, also announces score, inning, and number of outs. The batter bunts the first good pitch, takes two swings and runs out the third swing as far as possible, then returns to await his turn at bat. While waiting he engages in bunting practice, also swings bat at imaginary balls. The purpose of this group is to give: (1) pitchers and extra players batting and bunting practice, also opportunities to developing batting form by swinging bats; (2) infielders and outfielders practice making plays similar to those which they will have to make in regular games.



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Gypsying

(Continued from Page 223)

notice from just coming to a sitting position! But just wait until we would really get up out of bed and move about! So we surveyed our queer world a little longer and enjoyed just sitting there not having yet discovered sore muscles. Then a glance up at those spider webs led to a hasty decision to depart, so that before we knew it we had retrieved from our knapsacks the few articles of clothing we had removed the night before, put them on, and were up on our feet hastily gathering up bedding, and ready to depart, when I suddenly realized that here I was bending and twisting, stooping and rising, and walking about and not a sore muscle had yet proclaimed itself. My companion gave the same astonishing report! With a great feeling of exhilaration over finding ourselves feeling so fit, we scorned the ladders and, holding bedding and knapsacks high, threw ourselves over the edge of our loft and coasted swiftly down the hay from one level to the next, arriving at the great central aisle with its vast open door in almost no time. The boys were apparently still sound asleep, so we kept silent and made a dash through the rain to the house where we found a kettle of hot water and a warm breakfast awaiting us.

The entire family, except the head of the house who had long since started his day's work, was there to greet us. How had we slept? Did we really sleep? Had we had enough blankets? Did the barn swallows keep us awake? We had a merry chat about it all while I was permitted to turn the cream separator and my companion gave first aid to the hired man who had injured his hand with an axe. As we ate breakfast, the hostel mother plied us with questions as to how we thought they could better fit into the hostel movement. What should she do for the boys and girls who came limping in at night with sore feet and blistered heels? What about those who have brought their own food to prepare and it is not of the right kind? What should she advise them to buy the next time that would be energy-producing and healthful, yet easy to prepare and easy to carry in a knapsack? Here the visiting brother-in-law interjected the comment that the organization had recommended that the hostelers take musical instruments along and wouldn't it be better to tell them instead what kind of food to pack in their knapsacks? There was common consent to this with a loud "amen" from the two boys who were by this time up and struggling with their own breakfast preparation over the kitchen stove. And then the all-important question as to what she should advise them to wear the next time to give them better protection instead of the obviously incorrect clothing so many of them were wearing. She wanted to know how to be a good hostel mother, not just a chaperon or a lodging-house keeper, and she felt wholly unprepared.

They had fixed an outdoor fireplace and picnic table out under some trees in the yard where the hostelers could cook and eat in good weather. They planned to use the cow barn loft for a bunk room for either the boys or the girls and the hay barn loft for the others, but as yet there had not been groups of both in at any one night, except as they had come in a few family parties and as we had come last night, two older women and two high school boys who presented no problems of chaperonage or separate bunk rooms.

We Are Off for New Adventures

Then goodbyes and off on the trail for another day's adventuring! As time for such gypsying was limited on our calendar, we soon wound our way back to the starting point to reclaim the auto left at the first hostel. We arrived in time to pass judgment, upon solicitation of the hostel mother, on the new lamp shade which a shopping expedition had unearthed in our absence. Our return found the farmer more willing to chat upon a second meeting, but even then he clung closely to the traditional aloofness of the New Englander.

One night's gypsying found us sheltered in a cottage at the edge of a wee village where we shared the canvas-curtained front porch for sleeping quarters with two girls from New York City, while two boys were tucked away in a tent in the side yard and a man and his wife found lodging some place within the cottage. The sixty-year old man and wife with their two college sons were completing their tenth day of hiking. One of the boys proudly displayed the pack basket he had made himself and it well held its own with those on sale at the outing supply

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stores. The night was cold and the supply of blankets inadequate with eight hostelers in for the night. But my companion knew the art of making a "bachelor's bed" which she had learned in the Dakotas where they have to learn how to sleep warmly without too many covers in weather far below zero. The skeptical ones refused a demonstration and shivered the night through, while with the same amount of bedding those of us who were willing to experiment on bed making, slept as "snug as a bug in a rug" and awakened refreshed for a new day. But before we separated next morning the skeptical ones begged for a belated demonstration and a few more hostelers were thus initiated into the proper methods of making up a cot or bunk to get maximum warmth out of a minimum amount of bedding.

We Become Aware of Hazards of the Road

On the day that we resumed our journey by auto, heading for the west, we had not gone far when we recognized in the road ahead of us two hostelers—acquaintances walking on the wrong side of the road—that is, to the right, with their backs to oncoming traffic. As we came upon them we gave them a signal according to road rules. As they turned, they recognized us and apparently because taken by surprise at seeing acquaintances, they did not immediately step out on the shoulder of the road to give us clearance which would have permitted us to hold to our own half of the highway. Instead, we were forced over to the left to avoid striking them and, at the same time, wishing to speak to them, we slowed down preparatory to coming to a stop as soon as we could swing back to the right and over to the edge of the road. But by then two speeding cars had swung around the too near curve and a serious accident involving three cars and two hikers was in some way miraculously averted. In a breath-taking moment Death decided to take a holiday. Perhaps all would have been somewhat to blame but the original fault surely lay at the door of the hikers who, if they did find it necessary to hike on a main highway, should have known the rules of the road and, for their own protection as well as for the protection of others, should have been walking at the left edge where they would be facing oncoming cars and could see any signals the oncoming driver might need to make.

These girls possessed Youth Hostel passes yet they had not been informed of this simple fundamental rule of the road for hikers. If the American Youth Hostel movement is going to put onto our already crowded highways bands of hikers and groups of bicycle riders, as it hopes to do, it will readily fall into disfavor if it does not at the time train these hostelers in safety measures, so that they will not become a menace. In the first place, it should give out information strongly urging hostelers to keep off the main highways. It does recommend the back roads, but the recommendation is not strongly worded. It should inform them of the roads that are little traveled and should work towards the establishment of trails for the exclusive use of hikers and bikers. The *New York Times* of November 10 informs us that the special board of PWA has passed a resolution that so far as it is "prac-

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ticable and feasible the rights of way for highways constructed with PWA funds must be at least one hundred and fifty feet wide with parallel footpaths for the hiker." This is indeed good news. But in many parts of the country we do not have to wait for footpaths to be constructed. We already have a great wealth of mountain trails. The AYH would do well to make use of them. Surely it can establish some agreement with our already existent mountain trail clubs that would be mutually beneficial. Then there is the Prairie Club of Chicago which has much to teach this young movement. No doubt there are many such clubs in various parts of the country.

The present existing hostels are situated in a circle covering Vermont, New Hampshire, and northern Massachusetts. This very region is dotted mile upon mile by the marked trails of various mountain clubs. Yet the AYH gives those who are amateurs at hiking in that part of the country no hint of this.

We Offer Suggestions for Educating Hostelers

To make intelligent hostelers an educational campaign is necessary. It seems rather too bad to let the movement get off on a wrong foot here in America for lack of guidance along certain lines. It is not sufficient merely to furnish hostels and hostel mothers and fathers and a few hostel rules, taking for granted that American youth knows how to dress properly for hiking and biking, how to pack a knapsack to best advantage—even what kind to use—what kind of food to take along to best maintain proper health conditions under the need of "traveling light," how to make up a cot or straw pile to get the most warmth out of what little bedding may be available, or how to journey to conserve energy and preserve safety. These are only a few of the major bits of information that should be made available to all hostelers the moment they procure their passes. The acquisition of such knowledge should not be left to chance as now.

Also it would materially add to the pleasure of the trip itself and to its planning if accompanying the passes there might be more information than just the list of names of hostels and their addresses geographically arranged. The list should give the distances between hostels by the various existent routes so that one can in a way plan his trip ahead of time. The passes themselves clearly state that one should make reservations ahead, but it is difficult to plan on definite dates without knowing something in advance of distances to cover and a little something of the nature of intervening miles, whether they lie quietly in a valley or run precipitously over a mountain. Fifteen miles of mountain trail are quite different than fifteen miles of level road.

With hitch hikers the great nuisance that they are in many parts of the country, these Youth Hostels must never contribute towards a hitch-hiking movement on the part of *too* carefree youth. It is true that the Association asks that hostelers do not report into a hostel before five o'clock—this I understand is in part to discourage hitch hiking—but that alone is not enough. It must create among the hostelers an attitude of disapproval of those who have pretended to be lovers of hiking and have cheated by asking for lifts, except under emergency conditions. A real hosteler should scorn one who has used hitch hiking as a means of getting about from hostel to hostel.

We Express Appreciation for an Interesting Experience

The American Youth Hostel Association has something splendid to offer the youth of the land—something far and above its facilities, the hostels themselves. May it grow, but as it grows may it seize the great opportunity to give to American Youth a love of the Great-Out-of-Doors, as well as a love of wholesome companionship with youth from other parts of the country. And a real love for the Great-Out-of-Doors can be genuinely realized only in actual contacts that are made in such a way that health and well-being, physically as well as spiritually, are derived from the experience. And for this health and well-being, which shall be physical as well as spiritual, youth must be educated in the proper ways to approach nature, as well as in proper ways to approach human beings.

Getting back to Nature, living simply, assigning oneself physical disciplines, and mingling with all manner of humble folk for a period each year is very important for those who like to keep a well-balanced keel of body and soul. We agree heartily with Chilson Aldrich when he says in his book, *The Real Log Cabin*:

> It seemed to us that most of the ills of body and soul could be cured by one's dwelling for some part of his years among things that are instinct with primal life. Things in which health and strength and beauty abound. Things that grow instead of being builded. Things that pour out in notes that are untutored the heavenly joyousness of being alive. Things that the Greatest Out-of-Door Man of all the ages said "belonged unto our peace."

For those who love such things, the American Youth Hostels offer a way towards finding them. So come! Let's go gypsying, "before a day may find us too dull to dream and dare!"

The Motion Picture Committee

(*Continued from Page 235*)

7. The number of existing films of value in the teaching of women's sports (generally available) is negligible.

8. No criteria have been prescribed for the evaluation of an educational sports film.

The complete report of the college study appeared in the March issue of the *Research Quarterly*.

The committee is now extending its survey to include the secondary schools of the United States. A preliminary survey of Ohio high schools has been completed. The committee is engaged also in (*a*) developing criteria for the evaluation of teaching films in the field of sports; (*b*) developing techniques for the use of sports motion pictures in the classroom; and (*c*) developing outlines or script for specific activities.

The American Council on Education is preparing a complete catalog of educational films as they now exist and as soon as this work is complete it is our hope that

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we may view all films produced by various sources which might be adapted to our uses. The committee selected to view these films with the motion picture committee includes Eline von Borries, Chairman of the National Section on Women's Athletics; Marjorie Hillas, Chairman of the Women's Rules and Editorial Committee; Helen W. Hazelton; Grace Jones; Grace Daviess, former Chairman of the National Section on Women's Athletics; Katharine Hersey Oberteuffer, representing teacher training; and Dr. Margaret Bell, member of the Legislative Council of the American Physical Education Association.

A consideration of the studies in which we are engaged makes it obvious that there will not be quick results. The committee is unprepared at the present time to satisfy the many requests for specific information about motion pictures for use in the teaching of sports. The fact that these requests are being made is a tribute to the fact that there is tremendous interest in this field. It is our aim to proceed on a sound basis with a fundamental philosophy in regard to instructional films in physical education. Such a program will not, of course, produce immediate materials. We feel, however, that when our work is completed, we shall have something that will be exceedingly valuable for the teaching of women's sports.

Our next progress report will be made at the national convention of the American Physical Education Association in the section on Women's Athletics.

Physical and Health Program

(*Continued from Page 247*)

a right type of shoe for the foot has been a secondary matter, due to the increased cost entailed. For that reason a careful examination of many gymnasium shoes was made by the consulting orthopedist and the physical education teachers. Not finding the exact type of shoe they desired, an effort was made to have them manufactured. This was unsuccessful as the Laboratory Schools could not guarantee the use of a large enough quantity and the cost of a few hundred pairs would have prohibited their sale. Finally, a medium weight shoe with a built up longitudinal arch was selected. Arrangements were made through the consulting orthopedist to have metatarsal arch pads inserted in the shoes at a small cost. This particular type of shoe is used largely for its protective features. It is felt that the one-hour daily physical education period and the after-school play program may be a contributing factor toward pronated feet, especially so if the feet are inadequately protected against the jumping, turning, twisting, and slapping on the hard surfaces of gymnasium floors which may tend to break the arches. The longitudinal and metatarsal arch pads with a medium weight shoe should offer protection during the physical education period.

HEALTH supervision and service in the Laboratory Schools is rendered by two full-time physicians. The woman physician has charge of the girls and the man

physician of the boys. This division applies only to physical examinations as there is some overlapping in the care of pupils.

At the beginning of the school year each child in the Laboratory Schools is given a preliminary physical examination. These examinations serve a very useful purpose yet they are not as complete as desired. A second and more complete examination is given each pupil on his birthday. In addition to the preliminary and birthday examinations, special follow-up examinations are made when necessary.

The physical education teachers cooperate closely with the school physicians in matters pertaining to the health of the children. The physical examination records of each pupil are studied by the physical education teachers and his activities program is outlined accordingly. Most pupils are permitted to participate in the regular program without restrictions. Some are not permitted to take part in certain activities, a modified program is outlined for others, and in some cases a complete rest from activity is recommended. The physicians offer general advice as to the type of activity a pupil should have in case of a physical defect of a restrictive nature.

Daily excuses from physical activity due to illness or injury are given by the physicians. Inspection of such cases is made by the physician at the beginning of the physical education class period. High-school pupils issued daily excuses may be transferred to the boys' or girls' club restroom, library, or to academic teachers in case they want them for other work. Elementary school pupils issued daily excuses may be sent to the restroom or back to their classroom. Both elementary and high school pupils excused from activity are often kept in their physical education classes to observe and assist the instructor.

Body inspection of pupils is made by the physical education teachers once a week. This is done at the close of the class period and following the shower. The inspection is made largely for the purpose of detecting any signs of ringworm or warts. Any suspicious cases are sent to the physicians for further examination. All pupils having ringworm, warts, or other infections are not permitted the use of the shower baths or swimming pool. They are inspected periodically by the physicians so that they may be removed from the body inspection lists as soon as their case is cleared up.

In cases of permanent excuse from all physical activity the school physicians usually communicate with the family physician who may assist the school physicians in making the proper recommendations. This procedure is also often followed in cases of temporary excuses from physical education.

IN THE elementary school the classroom and physical education teachers stress desirable health habits important to the child at a particular age level. A direct teaching course in health education is given at the fifth-grade level. The time allotment is thirty minutes each day during one semester. The purpose of this course is to teach certain fundamentals necessary to an under-

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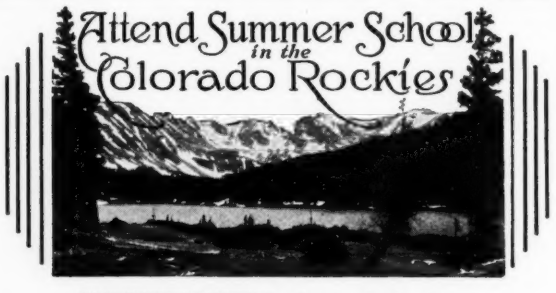

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standing of the principles on which the laws of hygiene and health habits are founded.

Up to the fifth-grade level, the teaching of health by the classroom and physical education teachers emphasizes the practice of health habits. Usually reasons for carrying out these practices are not stressed. By the time the children reach the fifth-grade level, however, their interest begins to wane in practicing health habits for health's sake. Much that has been gained may soon be lost unless a basic understanding of health habits can be given. The children will continue to accept the laws of health and hygiene provided that they can be taught the principles on which these laws are based. Otherwise interest is lost and even a distaste for certain desirable habits may be formed.

A science laboratory is used in teaching the fifth-grade health course. Experiments carried on by the children and demonstrations by the instructor make up a large part of the teaching procedure. The units are outlined so that each child may progress as rapidly as possible.

The content of the health course includes practice and study in many phases of first aid; the heart and circulatory, respiratory, and digestive systems; exercise, fatigue, body mechanics, foods, and food composition. Desirable habits of hygiene and health are included and stressed in each phase of the work after a foundation has been given for the proper understanding of these habits.

In the high school physical education classes, desirable health practices important to pupils at a given age level are continually stressed. The science courses in University High School are rich in material pertaining to an understanding of the human organism. In general science and biology certain units are devoted to the study of the human body. The social science department also teaches some unit materials of a public health nature.

IN THE administration of the type of physical and health education program conducted in the University Laboratory Schools many unsolved problems arise. Some experimental work is carried on in an effort to determine the best practices and procedures. The problems for experimentation are easily apparent and usually arise from within the program. However, the majority of these problems are important to the field of physical and health education in general. Time permits only an enumeration of some of the experimental projects being carried out.

Some of this work which we have done, or which we are now doing is as follows:

1. Segregating boys and girls as low as the third grade level for physical education activities.
2. The teaching of rhythms to boys in the upper elementary school grades.
3. The construction of fundamental tests for activities offered in the first, second, and third grades.
4. Experimenting with the placement of activities at different age levels.
5. Attempting to determine desirable content and methods of teaching health education in the elementary school.
6. Determination of the relationship between physical capacity and physical maturity of boys in the University High School.

7. The physical reactions of pupils of varying age groups during swimming periods. The water and room temperatures were controlled and varied. Physical activity during these periods was also controlled.

8. A study of the tendency of school children to develop flat-footedness. This study employs the use of footprints on all pupils in the Laboratory Schools from junior kindergarten through senior high school. The determination of the effect of certain types of gymnasium shoes on the feet is also included in this study.

9. A study of tests and measurements in physical education is being carried on in practically every activity offered in the program. A critical examination is being made of a large amount of test data secured in the Laboratory Schools and of similar work done in other schools. The coefficient of reliability is being determined for over 150 different sets of test and rating material.

10. A study of dominance of the upper and lower extremities is being made in an effort to determine its relationship to acts of skill in physical education activities. The dominance of one part of the body over another may have considerable significance particularly in teaching physical education skills to children in the lower elementary grades.

IN CLOSING I wish to say that the inclusive purpose of the Laboratory Schools Physical and Health educational program is to assist in providing a medium for the normal growth and development of each boy and girl. This theme was well expressed by Inskeep[1] in writing on child adjustment in relation to growth and development. He states that:

"This newer ideal for education can be realized when home, school, and society cooperate in seeing that every child enjoys the best physical, mental, and emotional health that can possibly be his. Step by step along the way his growth and development must be taken into account and planned for. It must enter into home feeding, into school grading, into community athletics. Education will then consist in guiding growth and development."

Physical Education

(*Continued from Page 217*)

tators. Leisure may be defined to be "that time when we do as we please," and an individual, or a home, a community, state, or nation may be adjudged by what it pleases to do in its leisure time. It can be an asset and it can be a liability. It is no longer the prerogative of the aristocracy, but is now the right of the masses. The youth of the aristocracy always was trained in the cultural things, and could use leisure constructively. Education is definitely confronted with the task of equipping all youth with skills and urges for constructive use of leisure. The youth movement all over the world can be interpreted only as the fulfillment of the great need created by regimentation in industry, a condition with which education has not kept sufficiently abreast.

May not the longer school day make possible this training in apprenticeship? Our time container has remained the same for years, and into it we have poured and poured so that the cup runneth over. We have the

[1] A. D. Inskeep, *Child Development in Relation to Growth and Development*. New York: D. Appleton and Co., 1930.

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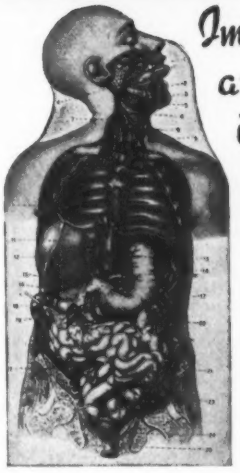

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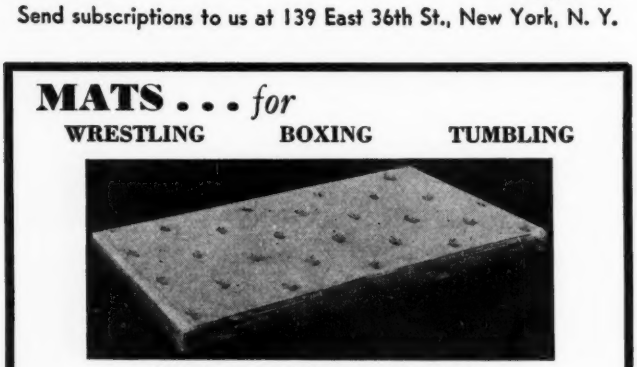

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shortest school day, the shortest school week, and the shortest school year of all the civilized countries of the world. The longer school day may well represent the workday of the child, leaving no work to be done at home. Such a day with its alternation of work and play should be a full but a happy day for youth, and would permit of sharing with clear conscience in the evening program of the home.

Such a change would require courage, but it required courage on your part to usher into the program such cultural things as we are discussing tonight. Is not the time ripe to make clear to parents and teachers that the value of these arts in education having been established, a liberal allotment of time must be found to treat these arts constructively for the purpose they are intended? Present conditions in the world today demand an education that will make the individual safe to himself and to society—an education that will make sure of earning a living as well as living a life—an education that will not turn out non-symmetrical people leading but fractional lives. Art in its widest sense, that of participation as well as appreciation, opens up unlimited possibilities to new ambitions.

May we be guided by wisdom in producing in our schools a generation less hampered and handicapped by inventions, and capable of capitalizing freedom so that it may be an asset instead of a liability.

The Red and Blue Meet

(*Continued from Page 260*)

sideward from the shoulder as the right circled overhead. The position of the arms was alternated with each step. As they entered the girls separated, one going to the right and one to the left. As each column reached its quarter of the gymnasium, a circle was formed. The result was four complete circles. From this formation they proceeded into their special drill using their flashlights. At the completion of the drill the circles disintegrated and they formed into a square around the floor. At this point, twelve girls costumed in white dresses with trains and narrow belts of bright-colored leaves and coronets to match, appeared and proceeded to the center of the floor. Then the Queen of the Harvest, who was the captain of the Red team, followed by her two attendants, a firefly and a wood nymph, ascended her throne, which was designed to represent a harvest moon and placed at one end of the gymnasium. When the Queen was formally seated on her throne, the twelve girls did a special waltz number in honor of the Queen and her bountiful harvest. The exit was effected in the same manner as the entrance.

THE details and execution of events 2, 3, 4, and 5 are obvious, and therefore they shall be passed over without comment. But it should be remembered that the posters, which illustrate ideas in connection with either the entrances or the dances used by the two teams are on display on the walls of the gymnasium during the

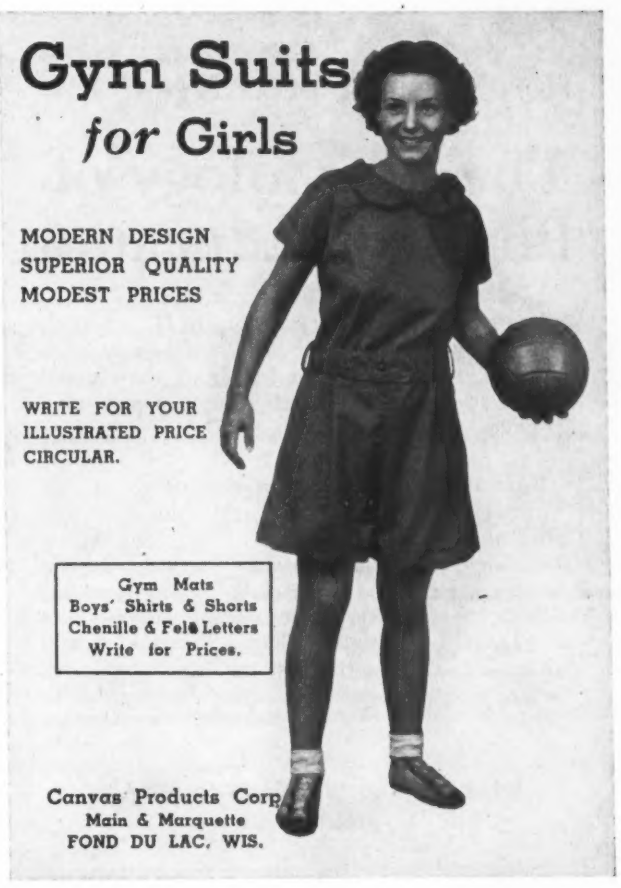
entire presentation. The winner of this contest is decided not by the judges but by the art instructor in advance of the exhibition and her decision is formally reported when the event is reached on the program.

The cheers which were rendered by each team proved to be one of the most popular events of the entire program. The two groups, numbering fifty each, which competed in this number arranged their cheers and drills in a most interesting manner. The Reds, garbed in red capes and hats to match, marched into the gymnasium and formed the letters R-E-D-S. From this formation they gave four cheers. They then performed a special flashlight drill and made their exit. It will be noted here that this group followed the theme of its entrance. The Blues, on the other hand, departed from their original idea and presented their cheers from an aeroplane figure. The participants were dressed in aviator costumes of silver hue. The propellor effect of the aeroplane was achieved by placing a piece of cardboard in an electric fan.

The most colorful features of the demonstration are the specially costumed dance numbers. The Blue team performed a waltz called "The Silver Ball Dance" to the strains of Godowsky's waltz. The dancers were clothed in flowing dresses of blue voile, caught at the waist with silver cord. The head dress consisted of silver hair bands. Twenty girls participated and as the dance progressed, divided themselves into five groups, one for the center and one for each corner of the gymnasium. The girls of the corner groups each held a silver ball while the center group converged around one large ball. The balls were ordinary beach balls, painted silver and sprinkled with tinsel. During the number, the lights were dimmed and blue spot lights reflected upon the dancers. The effect was most striking.

The tap dances, "In the Gay Nineties," and "Arithmetic," are tap routines that may be found in Miss Duggan's excellent work, *Tap Dances,* published by A. S. Barnes and Company. "The Gay Nineties," a waltz tap, was performed by the Reds. This group, consisting of sixteen girls—eight dressed as boys and eight as girls in the typical fashion of that period, went through their routine much to the amusement of the audience. The Blues in their "Arithmetic" dance had a group of twenty, sixteen representing pupils and four as teachers. The pupils wore the traditional blue gingham dresses and hair ribbons, while the teachers, depicting the "old maid" type, wore somber, black cambric dresses with long sleeves, tight waists, and full length skirts. The ludicrous effect, which was intended, was accentuated by nose glasses and high coiffured hair. The audience derived quite as much enjoyment from this number as they did from the other.

Events 8, 9, 10 explain themselves. However, in respect to tumbling and stunts it should be noted that it is usually quite difficult to confine the material so that each group is able to perform within the allotted ten minutes. Of course the problem can easily be solved by allowing more time for these items. It has been found that twenty minutes devoted to these activities is usually about as much as the audience can stand and still retain its enthusiasm.



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At the conclusion of the program the winning team was designated, after the official decision of the judges had been rendered, and presented with a trophy in the form of a cane with the color of the winning team attached. The presentation of the trophy was made by the superintendent of schools and served as a fitting climax, in the form of a finale, to an interesting and enthusiastic entertainment.

Health and Physical Fitness

(*Continued from Page 227*)

than vital capacity of the lungs is the minute-volume of the heart. At rest the average heart may put out about four liters of blood per minute and this is enough to absorb the three hundred cc. of oxygen needed for resting quietly. But when the muscles are working at a rate which requires that they be supplied with ten to fifteen times this amount, the heart must increase its output accordingly if it would not fall too far behind.

Dr. Dill (1933), who has worked extensively in this field, reports that whereas athletes may pump enough blood to transport from three to a maximum of five liters of oxygen away from the lungs per minute, the average inactive person can take in only two liters, and a person with heart trouble a half liter or less. This means that the five-liter absorber can do ten times as much work or endure ten times as long as the half-liter cardiac case. He is ten times the distance from bankruptcy. Such extremely high oxygen intakes are possible, first, because the trained athlete's heart is able to pump out almost twice as much blood with each beat as is that of the average person (Bock *et al.*, 1928), and second, because his vasomotor system so controls the size of the blood vessels that most of this blood is forced to go through the active muscles (Lindhard, 1915, and Collett and Liljestrand, 1924), where now there may be as many as 2,500 capillaries functioning in each cubic millimeter (Krogh, quoted by Lindhard, 1931). Here more of the blood's oxygen is unloaded, so it returns to the lungs even greedier than before to reload with oxygen.

It is hardly necessary to add that the same blood which carries the greater supplies of oxygen to the muscles returns with comparably increased loads of carbon dioxide, the waste product which it expels into the lungs. To carry this oxygen and carbon dioxide the blood must be well stocked with red corpuscles bearing hemoglobin. In fact, it takes approximately twenty-five trillion of the former and over a pound and a half of the latter. Since the estimated average life of a corpuscle in the circulation is between twenty and thirty days, it appears that the red bone marrow which makes them must turn out about one million such corpuscles each second if it would keep up the standard of the blood.

If for a brief moment the blood is unable to bring enough oxygen to the working muscles, immediately lactic acid will accumulate. Free lactic acid would cause the muscle to stop. To avoid this the lactic acid is temporarily neutralized by the buffers of blood and muscle. In this way about four ounces of lactic acid can be made harmless pending the advent of oxygen to dispose it.

To endure, the body must rid itself of the waste product *heat*. This usually presents no special problem at normal temperatures, but at high temperatures it appears that the body must learn still another adjustment if it would survive. The heat generated in the muscles is brought to the skin by the blood. Here, also, the sweat glands are stimulated to greater activity. The evaporation of the perspiration takes heat from the skin and the blood coursing through it. Thus even at temperatures of 110–120°F it becomes possible for a person actually to "refrigerate" himself down to approximately body temperature. This requires a lot of perspiration and therein lies a danger. Sweat normally contains sodium chloride. With profuse sweating too much of this salt may be lost and this apparently leads to heart failure. Now it appears, from observations made by Dill (1933) at Hoover Dam and by Professor Lehmann (1935) in the laboratories of the Kaiser Wilhelm Institute in Dortmund, that people who are accustomed to working at these high temperatures learn to hold back the salt and perspire instead almost pure water.

Perfect endurance would mean the ability to maintain top speed of muscle power indefinitely. This is impossible of attainment because of the terrific energy-releasing machines which our muscles are. Instead, we are capable of *maximal effort* for only brief periods at best. *Lesser effort* can be longer sustained. *Moderate activity* by some, and *mild activity* by most all, can be sustained indefinitely. Thus persons are scattered on the road leading from perfect endurance to the invalid state. The distance which separates them from the latter may be expressed in terms of:

1. the amount of phosphocreatine and other immediately available fuel in the muscle cell;
2. the buffering capacity of muscle and blood;
3. the oxygen and carbon dioxide carrying capacity of the blood measured in hemoglobin, red corpuscles, and alkali reserve;
4. the minute-volume of cardiac output;
5. the amount of carbohydrate and fat stores of liver and muscle;
6. the digestive and absorptive capacity of the digestive system;
7. the vital capacity of the lungs, perhaps the permeability of the lung surface to oxygen (little is known about the latter);
8. the degree of hunger which generally motivates the search for food;
9. the ability to acquire food, which may be dependent on physical, mental, economic, social, or even political factors.

Certain Practical Suggestions

Health and physical fitness are treasures which one may possess in greater or lesser degree. No one is certain just how much of this treasure is at his disposal. Only when his withdrawals approximate an overdraft does he receive notice. This notice comes in the form of infections, degenerative diseases, fatigue, breathlessness, or weakness.

Naturally, one asks how deposits can be made to increase this treasure, thereby staying the moment of overdraft. With your permission, I will close with a few suggestions which may serve these more practical dis-

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cussions of how to *develop* health and physical fitness.

First, our knowledge concerning the improvement of resistance to disease is large but rather general. It includes emphasis on diet, with special reference to proteins, minerals, and vitamins. It demands sufficient rest, the avoidance of continued physical and mental strain, and greater emphasis on recreation and relaxation. It prescribes the development of personal habits to insure continuous and effortless practice of the above.

Second, the strength of a muscle is directly proportional to its effective cross section and is equal to about 140 lbs. to the square inch. It is well established that muscles grow larger (hypertrophy) and smaller (atrophy) in response to demands placed upon them. Exercises of strength or speed which demand the maximum tension of a muscle cause it to respond with hypertrophy and proportionate increases in strength. To this generalization the large muscles of weight lifters, wrestlers, gymnasts, and sprinters bear witness.

Third, endurance is best developed by long, gruelling physical exertion in which the skeletal muscles work comparatively slowly. The long duration of the exercise throws the load on the heart, blood, circulation, and the respiratory and nutritional mechanisms, thereby forcing heart development and the establishment of many new reflex adjustments and chemical equilibria in those mechanisms which serve the heart and muscles.

Fourth, the so-called Rogers' test (Rogers, 1932) and others based on *strength* attempt to assay health and physical fitness by measuring the amount of strength the body is able to develop for a comparatively short period. They assume that only an otherwise perfectly functioning body can develop and support such power units and therefore strength becomes indicative of total health. On the other hand, the numerous organic efficiency tests which center attention on such factors as heart rate, blood-pressure, blood-ptosis, and sustained breath control measure factors more closely related to the attainment of *endurance*. Recently McCurdy and Larson (1935) have claimed new and greater success with such a battery. Perhaps some day someone will develop a happy combination of the two.

Fifth, one may also ask how much strength and how much endurance should be developed. Are not large muscles and extra-powerful hearts useless appendages in modern man?

Still another question is in order. Does one build health and physical fitness ad libitum by developing strength and endurance, or are there constitutional factors which limit the process? Is not the *ability* to develop power itself a sign of fitness?

These questions have answered themselves.

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Trends in Physical Education

(*Continued from Page 234*)

appeared. The barn has given way to the garage. There are people everywhere, but no "neighbors." The streets are unsafe. Most homes have no woods, streams, or space. The responsibility is all the greater. What is needed is father-son fishing trips, mother-daughter gardens, and wholesome sex information imparted by keeping pets at home in partnership with parents. The family hike and the family camping trip are other gifts that nature is making to the leaders of physical education in the home. It is time for health education, physical education, and nature education to join hands in a common enterprise.

Perhaps camps, more than any other American institution, have broken down the Chinese wall of formalism. A camp is not a summer hotel, or an outdoor gymnasium, nor a city playground or dance hall. In camp, where activities are elective, the offerings have had to be enjoyable experiences. Hikes have had to be freed of blisters, sunburns, scratches, and bugs. Pioneering has been divorced from coaches, athletics, and botanical lists. A nature counsellor no longer sneers at canoeing and a director does not want a game leader who is going to throw a monkey wrench in the machinery by dubbing children on a nature trip as "posey pickers." Activities in camp are no longer classifiable as physical education or as nature education. They are a goodly mixture of each.

Finally, physical education departments must turn out graduates who can meet existing situations. A few actual

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case problems are presented for solution or for a working plan. What would you do in each case?

Case 1. In Cincinnati there is a blighted district in which lives 1/40 of the population, but where 1/20 of the crime and 1/20 of the deaths from tuberculosis and social diseases occur. It is a negro district where many of the population were brought in for industrial purposes during the World War but have been left without income due to the depression. A slum clearance project has made an open area of twelve acres. It is the property of the Nickel Plate Railroad, though they are willing to give unlimited use of the land providing it has a worthy use. The Recreation Department can furnish a leader but has no funds for improving the land. How would you raise money? Make a seasonal program for the neighborhood. How would you get the program in operation? An abandoned school building is available.

Case 2. One section of Toledo, seven miles from the Civic Center, is located on some flats by Lake Erie. The neighborhood is surrounded by oil and gasoline tanks. Dredges have been making a channel from the river out into the lake and have thrown up barren islands. The shell-like houses were originally built for a summer colony which abandoned the site because of the oil and tar on the bathing beach. The houses are crowded together without yards. The children are transported to school by a bus. The only local public building is a summer dance hall which has shutters. It is large, with excellent hardwood floors, but only one stove. Out of doors there are no trees except a row of old willows along a ditch. The marshes are wet and oftentimes frozen. There are acres of cattails. The lake wind is very bleak. The men are on W.P.A. You are appointed recreation director. What would be your program?

Case 3. Indian Mound Camp of the Milwaukee Boy Scouts. This camp has some sixty acres of hardwood forest on a lake shore. You wish to make it a wild life reservation, not only that the scouts will have a chance to study the plants and animals, but so that they can practice conservation. You take a group out to winter camp. You see five hunters and two hounds after a rabbit. You feel that amongst other things it is dangerous to have hunters and scouts roaming about at the same time. You own the property and feel rather strongly about protecting the game. You hesitate to say anything as the hunters have always had "free rights" and also as they could easily "get even," perhaps by setting a fire. You are awakened early in the morning by duck hunters who are in a boat which is hidden in a "blind" in the tall grass just off the point. The hunters have decoys in the open water. What will be your procedure?

Case 4. You are going to attend the annual convention of the American Physical Education Association in St. Louis. You hear that Doctor Henry M. Kennon, who has charge of the birdhouse in the St. Louis Zoological Park, is doing outstanding work with humming birds! Doctor Kennon has discovered some very interesting vital statistics. He is glad to show his humming birds to visitors. A group of you arrange with Doctor Kennon

for a guided trip. He tells you (1) that each humming bird eats four times its own weight in food daily; (2) that they feed every three minutes; (3) that the feeding stations have to be arranged so that no food gets on the wings of the bird, as it kills the bird; (4) that each bird has to have an individual feeding station; (5) that the temperature of 92° F is under thermostatic control; (6) that he grows fruit flies for special feeding; (7) that a spray-shower bath is necessary, etc. What use of this experience can you, a teacher of health and physical education, make?

Physical Education and the Parent

(Continued from Page 231)

ing the six weeks of the experiment. The library reported no disturbances and the merchants were thoroughly pleased. On the basis of this demonstration, the agencies worked out a most comprehensive recreation program for winter evenings in which both school district and city would cooperate. Each tax-levying body was persuaded to include a small sum in their budget to care for this. Unfortunately, the same education had not been carried on with the tax conservation commission and that austere body cut the sum out of both budgets.

A part of the plan presented to the school district may be of interest to this group gathered here in behalf of physical education. It related to schools in districts where many of the children came from homes in which both parents worked. These should maintain supervision of the school playground after school. Such schools would include two physical education instructors, a man and a woman. The woman would come on duty at eight o'clock, take her place on the school grounds until school begins the morning session. She would then schedule primary classes and classes of older girls, completing her work by two o'clock. The man instructor would come on duty around ten o'clock, schedule classes of boys, and would be on duty on the school grounds or in the gymnasium until 6.00 P.M. Such a program would have utilized school equipment to the full and would have lessened the accident hazard caused by children playing in the streets.

Weekly recreational programs under experienced supervisors are being financed by parent-teacher associations in many parts of the state; in other communities these P.T.A.'s are assuming the leadership in getting public support for summer park programs. This trend shows the acceptance by parents of the rounded, modern physical education program.

ALL in all, parents are awakening to the newer trends in education. They are taking the seven objectives seriously. They wish their children prepared for healthful, happy, successful living. And they are measuring the subjects offered to this scale. The task before them and before such organizations as yours is the education of the public to demand standards in this service both in equipment and personnel, and to establish a public opinion willing to give the financial support for such a program.

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New Books Received

Complete book reviews are contained in the RESEARCH QUARTERLY

Principles of Hygiene. Thomas A. Storey, M.D. (Stanford University, California: Stanford University Press, 1935) 524 pages. $3.50.

The revision of this popular college textbook outlines the causes that ultimately determine and regulate the production, improvement, maintenance, and defense of physical, mental, and social health. The first twelve chapters have been largely rewritten, the statistical data have been brought up to date, and a number of diagrams of scientific and artistic quality have been added. The present volume is to be followed by *The Practice of Hygiene.*

Track and Field Athletics. D.G.A. Lowe. (New York: Pitman Publishing Corporation, 1935) 143 pages. $1.00.

This excellent little book is the latest addition to the literature of track athletics. Written by an exceptionally good track man, many significant details of technique appear in *Track and Field Athletics* which are not included by those authors who are less experienced. The author's descriptions are composites of the best teaching in this sport to be found in Europe and the United States. It is recommended for coaches and students of the sport.

Ideal Health, or The Laws of Life and Health. Alexander Bryce, M.D. (Bristol: John Wright & Sons, Ltd., 1935) 340 pages. $2.00.

This third edition is written to help diminish the still widespread ignorance concerning the best means of caring for the body. It should be of interest to all who are concerned with the preservation of health. Written by an English author, it indicates the present status of the development of hygiene in England. Too elementary for a college textbook; recommended for the laity, and possibly as a textbook for use in the senior high school.

Growing Superior Children. I. Newton Kugelmass, M.D. (New York: D. Appleton-Century Company, 1935.) 568 pages, $3.50.

Dr. Kugelmass gives in this book very complete information about the normal growth and development of children from birth to adolescence, and about the scientific methods of aiding this development so that each child may realize his potentialities for superior mental, physical, and social growth. Emphasis is placed on the necessity for individualization of treatment of each child, and on sound principles of emotional and social guidance for normal adjustment. Although the book is written especially for parents, much of the material contained in it will be of value to teachers and leaders of children and adolescents.

The American State and Higher Education. Alexander Brody. (Washington, D. C.: American Council on Education, 1935) 251 pp. $1.50 clothbound; $1.00 paperbound.

This volume is the first publication issued by the American Council on Education's Joint Committee with the Social Science Research Council on Administrative Phases of State Educational Systems dealing with the many problems involved in the administration of higher education. The purpose of this study is to present higher education as a function of government and to show the political factors which affect its administration. An analysis has been made of the political and legal conditions which underlie the creation, support, and administration of state institutions for higher education in the United States. This book will acquaint the student of education as well as the student of government with the pattern of legal control of higher education in the United States, and with those aspects of the legal and judicial process which enter into the determination of educational questions.

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